



PAHA-SAPA

The
BLACK
HILLS
of
South
Dakota



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Yours Truly
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PA-HA-SA-PAH,

OR THE

BLACK HILLS OF SOUTH DAKOTA.

A COMPLETE HISTORY

Of the Gold and Wonder-Land of the Dakotas from the Remotest Date
up to the Present, Comprising a Full Account of the Original
Inhabitants, the Whites who Came in Contact with
them; Opening up of the Country for
Civilization, and its Social and
Political Development.

By REV. PETER ROSEN,

For Seven Years a Missionary in the Black Hills.



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P R E F A C E .

It was in September, 1882, when coming from Europe where I had finished my education, that I was put in charge of St. Ambrose Parish at Deadwood and the Missions in the Black Hills. Rev. J. J. Shea was at that time pastor at Lead, and by mutual agreement we exchanged frequently our outside work, and I was thus placed gradually in contact with all the people and places in the Black Hills. Naturally desirous for information regarding all that pertained to this grand region of the Northwest I found that outside of local newspaper accounts the resources for information were rather meager, and that what existed was difficult of access. But gradually the notes and "clips" I got from here and there amounted to considerable material, and when a well-meaning friend suggested the publication of the same, another true friend warned me saying: "I pity a friend of mine who goes into book-making."

Still believing that a benefit would be conferred upon the public by making it easier to others than it had been for me to become acquainted with the country, I collected wherever I could get hold of anything referring to the Black Hills, and regardless of expenses obtained all books where mention is made of the region. Assistance was kindly given me by the Hon. Librarian of Congress at the Capitol at Washington, D. C., and all Government records referring to the Black Hills were put at my disposal. Likewise did the Rev. Fathers, Librarians, of the Jesuit Colleges at Georgetown and St. Louis, allow me the use of their records; and at the latter place the manuscript letters of Father DeSmet.

Of the many books consulted I can mention only a few: The Annals of the Propagation of Faith; Bancroft's His-

tory of the United States; Schoolcraft's History of Indian Tribes; Parkmann's Works; Catline's Indian Gallery; George E. Ellis' works; the Memoirs of Rev. S. R. Riggs and Rev. Gideon H. Pond; A. T. Andreas' Atlas of Dakota; the reports of the Minnesota Historical Society; the works of General and Mrs. Custer; books on frontier-life on the plains, and many others too numerous to mention were consulted.

Oral information was often unintentionally given on the many and often long "trips" across the country on stage or hack lines. For over five years I had to travel about two hundred miles weekly in and around the Hills on wheels. The companions on the public conveyances did their share to make me acquainted with Western life and manners. But I must say here that never did they allow themselves to be carried away to such an extent as to use in my presence rude or unbecoming language. In case the weather would cause me to wrap shawl and furs so tight around me that I was hardly recognizable, and thus my presence not noticed, a sharp cut, "Don't you know that a priest is in the coach" had the desired effect. The conversation became often most interesting, and many a line within this book owes its origin to these "trips."

Hon. Dan McLaughlin of Deadwood deserves my and the public's thanks for placing his excellent lectures of Mines and Mining at my disposal. The officers of the School of Mines at Rapid allowed me the benefit of their researches, for which I thank them. The editors of the local papers in all the localities in the Black Hills were most kind to me, and I thank them for it. My thanks are also due to John Treber, Thomas Russell and Porter Warner of Deadwood; P. A. Gushurst and the Abt family of Lead; C. C. Moody and Olaf Helweg of Sturgis; John Brennan, Dr. McGillicuddy and P. McCarthy of Rapid, and many others.

My frequent contact with the Indians made me acquainted with many of their habits and modes of life; lengthy conversation with many of the chief men among

them led to a knowledge of their ideas and their history as to their migration from the East to the West. Their traditions are many, and I may say that some of them are published here for the first time.

The "bringing in" of the Spanish explorers may seem to some rather "far-fetched," but in my opinion a valuable starting-point is given to the future historian who may thereby be able to explain a great many of the ideas of the Indians, who have distorted, misconceived and wrongly handed down by tradition some things which they learned centuries ago from the Spaniards. Besides remnants of old cabins, places of abode as shown by their ruins to have had Europeans for their builders are found around the Black Hills, and might they not be of Spanish origin?

About the present condition of the Indians in South Dakota and their advance in civilization I will speak in a subsequent volume if this one finds favor with the public.

Also about the work done by the different religious denominations in the Black Hills, and their present condition and apparent prospect, would have found room in this volume had the amount of material not forbidden me to curtail the same, and due consideration and full satisfaction will be given to all of whatever denomination they may be.

The kind reader will condone the shortcomings he may find here and there and bear in mind that I do not lay claim to literary merits, and publish the volume for no other purpose than to make the world at large acquainted with that part of the United States which has up to now not found any one to give a complete history about it. The people of the Black Hills will surely be thankful for the pains I have taken to show them all about their homes.

Need more be said?

THE AUTHOR.

HEIDELBERG, MINN., August 14, 1895.

CONTENTS.

BOOK I. — INDIANS IN THE HILLS.

CHAP.	PAGE.
I. The Black Hills	1
II. The Crows	3
III. Further About the Crows	8
IV. The Cheyennes	16
V. The Sioux	26
VI. Indian Religion	31
VII. Indian Deities	37
VIII. Use Made by Medicine-Man of his Powers	42
IX. Devil's Tower	51
X. Bear Butte	53
XI. Indian Characteristics	55
XII. Indian Habits	61
XIV. Dakota Homes	68
XV. The Buffalo	72
XVI. Indian Arrows and Bows	85
XVII. Warfare	93
XVIII. Scalping	99
XIX. The Sweat Lodge	102
XX. Counting Time	106
XXI. The Calumet	109
XXII. Various Dances of the Tribes	117
XXIII. Family Life	124
XXIV. Funerals	128
XXV. The Amorous Trapper	131

BOOK II.

I. Ponc de Leon	136
II. Pamphilo de Narvaez	140
III. DeSoto	148
IV. Coronado's Expedition	152
V. Spanish Missionaries	160
VI. Retrospect of the Spanish Missions	165

CHAP.	PAGE.
VII. Fur Trade	169
VIII. The French in America	175
IX. French Missionaries' Exploits	180

BOOK III.

I. Father DeSmet	185
II. Father DeSmet among the Indians	219
III. Father DeSmet among the Black Hills	229
IV. The DeSmet Mine	238

BOOK IV.

I. Lewis and Clark Expedition	248
II. Warren's Expedition	254
III. Capt. Reynold's Expedition	260
IV. The Sioux and the U. S., 1825-1874	269
V. Custer's Expedition	274
VI. Gold in the Black Hills	303
VII. Gordon's Stockade — Pioneer Explorers	308
VIII. Geological Structure of the Hills	322
IX. Death of Gen. Curtis	335
X. Treaty in 1875 for Cession of the Hills	341

BOOK V.

I. Gold Mining in the Hills	346
II. Gold Digging	353
III. Prospecting for Mineral Bearing Rocks	364
IV. The Charity of the "Honest Miner"	372
V. Legends	384

BOOK VI.

I. South Dakota at Large	388
II. Deadwood	397
III. General Crook in the Hills	405
IV. More of Deadwood	412
V. Territory of Lincoln — Lawrence County	422
VI. Lead (formerly Lead City), Terraville, Central City, Galena, Spearfish Creek and Spearfish	425
VII. Mead County — Sturgis and Fort Meade	447
VIII. Pennington County — Rapid City	457

CHAP.	PAGE.
IX. Custer County — Custer City	466
X. Fall River County — Hot Springs	472
XI. Butte County	478

APPENDIX.

LECTURES ON MINING.

No. I. A Short History of Mining	486
II. Public Policy of Governments in Relation to Mining, Particularly of the Precious Metals	507
III. Public Policy in Relation to Gold and Silver Mining in the United States	517
IV. Growth of Customs, Rules and Regulations Among Miners in Relation to Mining	534
V. The Mining Laws of the United States and the Local Mining Laws of the States and Territories.	543
VI. Discovery and Appropriation of Lode and Placer Claims	578
VII. Mode of Locating Placer and Lode Claims on the Public Lands	589
VIII. Occupation and Possession after Location, by De- velopment from Year to Year.	593
Natural Resources of the Hills	597
Mineral Resources of the Hills	612

ILLUSTRATIONS.

	PAGE.
Sioux Indians	2
Little Hawk	5
Red Cloud's House at Pine Ridge Agency	21
Spotted Tail	28
Omaha Dance, Rose Bud Agency	35
A Medicine-Man	45
Indian War Dance	49
Bear Butte	54
An Indian Home	57
Sitting Bull's Son — Buffalo-Man	63
Indians on the Move	69
Mandan Chief's Robe	83
His-oo-sau-chees, the Little Spaniard	91
Scalping by North American Indians	100
Sou-mick-o-sucks, Chief of the Blackfeet	110
Chuicahua Apache Squaw and Papoose	126
Indians Making Offerings to their Dead	129
A Trapper's Home	132
Small Wolf, Cheyenne Chief	134
Advance of Civilization	138
Hernando Cortes	141
DeSoto on the Shore of the Mississippi	151
Home of the Prairie Dog	157
Baptism of Indians at Port Royal	167
Before the Advent of the Pioneer	171
LaSalle Claims the Mississippi Valley for France	177
Marquette on the Mississippi	182
A Comanche Warrior	207
Rock of Ages	241
Father DeSmet and the Aboriginal Miner	245
Rocks on the Plains	252
The Old Man of the Park	265
White Bull	289

	PAGE.
Dinner is Ready	313
Indian Chiefs and Braves in Gala Dress	337
Carlo and Spitz	342
Prospectors Going to the Gold Fields	349
Lead Mines and Mills	355
Caledonia, etc., Mines	361
Blasting on First R. R. to Black Hills	375
First Settler's Home	395
Near Deadwood in the '90's	399
A Home in the Present Deadwood	415
Smelting Works at Deadwood	419
City of Lead	427
House of Worship in Lead	429
The Great Homestake Gold Mines	431
Terraville	433
DeSmet Mill and Mines in Central City	435
Branding Calves on "Round Up"	449
Portrait of Gen. Sturgis	452
St. Martin's Academy and Church Grounds	454
English Tourists in the Hills	458
A Mess Scene on "Round Up"	460
Custer City in 1876	467
Bear Rock, French Creek	469

FULL PAGE HALF-TONES.

FACES PAGE.

Frontispiece.

Father DeSmet	185
Rev. H. W. Smith	403
Sitting Bull	406
Deadwood	397
Devil's Tower	51
Hot Springs	474
Natural Scenery	125
Spearfish in 1895	433
Near Fort Meade	456
Chinese Hose Team	256
The Deadwood Coach	420
Charge of Indian Warriors	14
"Freighting" in the Black Hills	417
Hydraulic Mining in the Hills	543

Sluice Box—Placer Mining in the Hills	357
“Clean Up” at the Homestake Mills	623
Cheyenne Indians Skinning Beef	25
Donkeys with Miner’s Outfit	378
Sylvan Lake in Custer Park	166
Mrs. Canutson and Oxen Team	214
“We Have it Rich,” Washing and Panning Gold	246
Bird’s Eye View of Battlefield of Wounded Knee	340
Meade—Bear Butte and Fort Meade in the Distance	448
Gen. Custer	335
Sha-bash-Kong High Priest, and his two wives	102
Golden Reward Mine near Lead	612

To the
Memory of my Mother

This book is dedicated.

By her grateful son,

The Author.

BOOK I.

THE INDIANS IN THE BLACK HILLS.

CHAPTER I.

THE BLACK HILLS.

Closely embraced between the two principal forks of the Cheyenne river arises a magnificent group of mountains extending about one hundred miles north and south and about sixty miles east and west. To this group of mountains the great Dakota or Sioux nation gave the name of Pa-ha-sap-pah, or Black Hills.

The geographical location of these hills — the Montenegro of America — is between the meridians 102 degr. 30 min. and 105 degr. longitude west from Greenwich; or 25 degr. 30 min. and 28 degr. west from Washington; and between 43 degr. 20 min. and 40 degr. 45 min. north latitude. The boundary line between the States of South Dakota and Wyoming is on the twenty-seventh meridian west from Washington; consequently about two-thirds of this area lies within the State of South Dakota. The area in South Dakota forms the counties of Butte, Lawrence, Meade, Pennington, Custer and Fall River. The present population is about forty thousand. Up to the year 1875 this region, now studded with towns and villages, traversed by the panting steam car, the lightning telegraph and the convenient telephone, was a wilderness, lying untouched almost by aught save the hand of nature. But she has been very lavish in bestowing her gifts.

Here the blue hills rise beyond and above the other, higher and higher till the lofty points kindle with the early light, and the overshadowing ridges, like masses of black clouds, touch the skies. Here the rocky cliffs towering in naked grandeur mock the lightning, and send from peak to peak the loudest peal of the thunderstorm. Here wholesome water gushes forth profusely from a thousand springs which, through fifty different creeks, send their water to the Cheyenne on to the Missouri and the Gulf of Mexico.*



SIOUX INDIANS.

Here the Scotch pine, the black and white spruce, burr oak, white elm, aspen, white birch, ash and box elder cover the hill-sides and the banks of the rivers. Wild plums and cherries and numerous kind of berries are grow-

* Names of the creeks: Gold Run, Deadwood, Whitewood, Bear Butte, Boulder, Two Bit, False Bottom, Iron, Stinking Chicken, Spruce, Redwater, Spearfish, Whitetail, Bobtail, Fantail, Sheeptail, Blacktail, Grizzly, Ruby, Potae, Squaw, Spring, Cottonwood, Ninemile, Deadman's Alkali, Morris, Pleasant, Antelope, Box Elder, Elk, Cherry, Plum, Horse, Indian, Crow, Owl, Lane Jonny, Crooked Oak, Jim, Rapid, Battle, French, Slate, Gimlet, Tenderfoot, Calamity, Beaver, Cascade, and Fall River.

ing here in abundance. In times gone by the forest was the home of the grizzly bear, the panther, mountain lion, mountain sheep, elk and antelope, deer and wolf. The beaver built his villages along the creeks, and the prairie-dogs had their towns along the foot-hills. The buffalo was king of the prairie, and the fox, prairie-wolf and a thousand other animals made their home here. The creeks and rivers were filled with nutritious fishes. Abundance of game, abundance of skins, abundance of everything which could satisfy the desire of the untutored red man.

Here his chieftains ruled and warrior braves fought and hunted. The smoke of their wigwams and the fires of their councils rose in every canyon from Beaver Creek to Redwater. The shouts of victory and the war-dance rung through the mountains and the glades. The thick arrow and the deadly tomahawk whistled through the forest.

Here once the warriors stood in their glory. Mothers played with their infants and gazed on the scene with the warm hopes of the future. The aged and weak sat down but they wept not. They would soon be at rest in the regions where the Great Spirit dwelt, in a home prepared for them beyond these western skies.

But this region, the last one they called their home, they could not long call their own. Before the greed of the pale-face and the steel they faded as the snow melts away before the vernal sun.

CHAPTER II.

THE CROWS.

The first inhabitants of the Black Hills and of whom we have any authentic information are the Crows.

They were called "Belantsea" by their neighbors, but called themselves "Absaroka" — anything that flies. They have left their foot-prints in the numerous trails

which cross the hills, and the inscriptions found on the rocks in Bear Butte Canyon, along Rapid Creek, Elk Creek and Minnekata; in the remnants of their wigwams found where now stand the prosperous towns of Rapid, Sturgis, Custer, and Hot Springs.

According to their tradition they formerly occupied the whole range of the Rocky Mountains with the beautiful valleys on both sides, from the Saskatchewan in the north and as far south as the mountains continue. Alexander v. Humboldt and other reliable authorities are of the opinion that the Crows are a branch of the original Toltecs. The history which establishes the migration of the Toltecs and Aztecs from the mountains of the northwest is extremely vague as to time. But from the similarity of their monuments it seems certain that the Aztecs and the Toltecs were portions of the same race. The different names were given them from the different periods of their migration or from the position to which they respectively went. Some of the people in Mexico to-day apply the term "Toltec" (Toh-tec) — mountaineers — to the people of the mountains, and "Aztec" (or Ah-na-tec) — lowlanders — to the people of the plains. Most probably the Crows, as a branch of the Toltec family in their southward migration, left the main group and crossed the Rocky Mountains about the year 1200 A. D., and gradually extending their meanderings as far east as the Missouri.

The following is their story of creation, to which they owe their existence. The same has been told by one of their number.

"Long ago there was a great flood and only one man was left, whom we call the 'Old Man,' because it happened so long ago and we have talked of him so much. This 'Old Man' was a god. He saw a duck and said to it: 'Come here, my brother.' He was sitting on a high hill — Bear Butte. He said to the duck: 'Go down to the water and get some clay and I will see what I can do with it.' The duck went away and stayed a long time. Coming to the surface it had a small bit of mud. The god said he

would make a something out of it, and added: 'We are here by ourselves; it is bad. Holding the mud in his hands till it dried, then blowing it in different directions, there was dry land all about it. The god, the duck and the



LITTLE HAWK.

ground was all that existed. He then made the mountains and creeks. After that they asked each other to do certain things. The duck asked the god to do certain things and among them to make Indians for the prairie. The god took some dirt in his hand, blew it away and there

stood a man and a woman. A great many crows sprung up at once from the dirt, but they were blind. The first man created pulled open one eye and saw the streams and the mountains. Then he pulled open the other eye and cried out that the country was fine. The first woman created did the same and they told the rest to do as they had done, and to this day the peculiar mark about the eyes shows the manner of opening them. The god called the first man and said to him: 'Look, here are antelopes, deer, elk and buffalo. I give you these to eat.' The god killed one buffalo for them. Then he took up a rock, threw it down, broke it and with one of the pieces cut open the buffalo. He showed the man how to make a bow and arrow, explained the parts of the buffalo, the location of the sinew and its use, the use of the skin for a robe; in fact, all that was necessary. Then he commenced dividing up the people, Crows, Sioux, Cheyennes and the rest, and gave them the country to live in. The people asked him if they were to eat the meat raw. The god then took two sticks and rubbed them with a little sand, and said: 'There, my children, is a small fire for you. Get some wood and keep it burning always.' But the first man said: 'Father, no. We want to move around. We cannot pack fire with us. Make it so we can get fire;' and it was done.

Then the first man asked for vessels to cook in and to carry water, and the god showed him how to dig out the black rocks for those purposes. The god then told him how to tan the skins of animals by means of the brain and liver, and how to grain it with the bone of the foreleg of the animal. He showed them how to prepare the skins for a lodge, etc., how to take the hair off, how to make the poles, and marked out upon the ground the shape to make the lodge. The god then said: 'Name yourselves, children;' and the first man said, 'We will name ourselves after the black bird,—Crows.' Then the god said, 'As I made you, I am going to tell you what to do. Cry; and as the tears drop on the ground you will know what it is.' The first man said 'That is not much to do, to cry; tell us

something else.' The god then said, 'I have made the high mountain for you; go up there. Cut a piece out of the flesh of your arms and give to me. Fast, and you will have visions, which will tell you what to do.' The god explained in regard to the sweat-houses. If they did not cure them when sick they would carry them to some other good hunting grounds. He then said: 'I have showed you how to make all these things; how to live. Among all the buffalo I have made a few white ones. When you kill one of these, sing three songs, place the skin on a hill; give the skin to me, I like them.' He also said, 'I like the black-tail deer-skin, and the hawks with white tails. Give me once and awhile some of these.'

The god then told them how to get horses; he told them to go over the hill and not look back. They started; one man was behind the rest; the horses came up behind, whinnying and prancing. The man behind could not resist; he looked back, and the horses vanished. If it had not been for this we would have had many horses. They then went to the Yellowstone river. The god said: 'This is your country; the water is pure and cold; the grass is good; it is a fine country and it is yours.' He then said, 'I made all this country around you; I have put you in the center; I have put these people around you as your enemies. They will fight you, and keep fighting you, until you are greatly reduced in numbers, and then I will come and help you.' He said, 'Kill your enemies; take their scalps; blacken your faces with fire-coal, and when any of your people are killed, let your tears fall to the ground, and cry out in your distress and mourning.' He also said that he would not help foolish people, but would assist those that were good. He said, 'I have put red paint in places in your country. Get this and make your faces and bodies red.'

After this he went to a tree, struck it, and the whites came out like mice out of a hole. He said, 'I have sent these whites to show you how to make iron. Do not fight them, shake hands with them. At eighty years you will

be pretty old, and at one hundred years you will be of no account; your skin will peel off. From the time you are born till you are fifty you will be strong and well; from sixty you will feel the weight of many winters; will be crippled and go down hill." He said then, 'I have given you all these things, sometimes give me what I have told you to, and when you make these offerings call on me; I will hear and help you.' He then took them all over the country and at Powder River disappeared."

CHAPTER III.

FURTHER ABOUT THE CROWS.

In appearance the Crows are fine-looking, tall, and well built. Catlin, in speaking of them in 1832, says: "They are really as handsome and well-formed a set of men as can be seen in any part of the world. There is a sort of grace and ease added to their dignity of manner, which gives them the air of gentlemen at once. I observed that many of them were over six feet in height, and many of them have cultivated their natural hair to such an almost incredible length that it sweeps the ground as they walk."

Irving writes of them in "Astoria": "They are notorious marauders and horse-stealers; crossing and recrossing the mountains, robbing on one side and carrying their spoils to the other." Hence, we are told their name is derived: given them on account of their unsettled and predatory habits, winging their flight, like the crows, from one side of the mountain to the other, and making free booty of everything that lies in their way.

Their language is coarse and harsh and does not seem to have a rich vocabulary. They have the reputation among the other red men for their cunning, skill and bravery in war. They have been almost constantly at war with the Cheyennes, Arapahoes and Sioux since the latter crossed

the Missouri river, though they have made peace dozens of times and confederated with them against other tribes and the whites. With the U. S. army they have been friendly since 1876, and have rendered some service as enlisted scouts. In their modes of life, manner of dressing, religious belief and warfare they are like the other tribes of the Cheyennes and Sioux. I subjoin here a letter from the great Indian missionary, Father De Smet, which he wrote after his second visit to the Crows: —

“ UNIVERSITY OF ST. LOUIS, 1st of November, 1849.

“ *Very Rev. Father:* —

“ In my last letter of August, I promised to write from St. Louis, should I arrive safely in that city. Heaven has preserved me, and here I am about to fulfill my promise. Leaving Father Point and the Flat-Head camps on the river Madison, I was accompanied by twelve of our Indians. We traveled in three days a distance of 150 miles, crossing two chains of mountains, in a country frequently visited by the Blackfeet warriors, without, however, meeting with any of these scalping savages. At the mouth of the Twenty-five-Yard river, a branch of the Yellowstone, we found 250 huts, belonging to several nations, all friendly to us: the Flat-Heads, Pierced-Noses, Kayuses, and Snakes. I spent three days among them exhorting them to perseverance, and to make some preparation for my long journey.

“ The day of my departure, ten neophytes presented themselves at my lodge to serve as my escort, and to introduce me to the Crow tribe. On the evening of the second day we were in the midst of this large and interesting tribe. The Crows had perceived us from a distance; as we approached some of them recognized me, and at the cry of “the Blackgown,” “the Blackgown,” the Crows, young and old, to the number of three thousand, came out of their wigwams. On entering the village, a comical scene occurred, of which they made me the principal personage. All the chiefs and about fifty of their warriors hastened around me, and I was literally assailed by them. Holding

me by the gown, they drew me in every direction, whilst a robust savage of gigantic stature seemed resolved to carry me off by main force. All spoke at the same time, and appeared to be quarreling, whilst I, the sole object of all this contention, could not conceive what they were about. I remained passive, not knowing whether I should laugh or be serious. The interpreter soon came to my relief and said that all this was but an excess of politeness and kindness toward me, as every one wished to have the honor of lodging and entertaining the Black-Gown. With his advice I selected my host, upon which the others immediately loosed their hold and I followed the chief to his lodge, which was the largest and best in the camp.

“The Crows did not tarry long before they all gathered together around me, and loaded me with marks of kindness. The social Calumet, emblem of savage brotherhood and union, went round that evening so frequently, that it was scarcely ever extinguished. It was accompanied with all the antics for which the Crows are so famous, when they offer the Calumet to the Great Spirit, to the four winds, to the sun, fire, earth and water. These Indians are unquestionably the most anxious to learn; the most inquisitive, ingenious, and polished of all the savage tribes east of the mountains. They profess great friendship and admiration for the whites. They asked me innumerable questions; among others, they wished to know the number of the whites. “Count,” I replied, ‘the blades of grass upon your immense plain and you will know pretty nearly the number of the whites.’ They all smiled, saying that the thing was impossible, but they understood my meaning.

“And when I explained to them the vast extent of the ‘villages’ inhabited by white men (viz., New York, Philadelphia, London, Paris, etc.), the grand lodges (houses) built as near each other as the fingers of my hand, and four or five piled up one above the other (meaning the different stories of our dwellings); when I told them that some of these lodges (speaking of the churches and towers) were as high as mountains, and large

enough to contain all the Crow together; that in the Grand Lodge of the national council (the Capitol at Washington) all the great chiefs of the whole world could smoke the calumet of peace at their ease; that the roads in these great villages were always filled with passengers, who came and went more thickly than the vast herds of buffaloes that sometimes cover their beautiful plains; when I explained to them the extraordinary celerity of those moving lodges (the cars on the railroad), that leave behind them the swiftest horse, and which are drawn along by frightful machines, whose repeated groanings re-echo far and wide, as they belch forth immense columns of fire and smoke; and next those fire-canoes (the steam-boats) which transport whole villages with provisions, arms and baggage, in a few days, from one country to another, crossing large lakes (the seas), ascending and descending the great rivers and streams; when I told them that I had seen white men mounting into the air (in balloons) and flying with as much agility as the warrior eagle of their mountains; then their astonishment was at its height; and all placing their hands upon their mouths, sent forth at the same time, one general cry of wonder. ‘The Master of life is great,’ said the chief, ‘and the white men are his favorites.’ But what appeared to interest them more than aught else was prayer (religion); to this object they listened with the strictest individual attention. They told me that they had already heard of it, and they knew that this prayer made men wise and good upon earth, and insured their happiness in the future life.

“They begged me to permit the whole camp to assemble, that they might hear for themselves the words of truth. I pitched my lodge on a large field, in the midst of the camp, and there three thousand savages, including the sick, who were carried in skins, gathered around me. I knelt down, beneath the banner of our country, my ten Flat-head neophytes by my side, and surrounded by this multitude, eager to hear the glad tidings of the gospel of peace. We began by intoning two canticles, after which I recited all

the prayers, which were interpreted to them. Then again we sang canticles, and I finished by explaining to them the Apostles Creed and the Ten Commandments. They all appeared to be filled with joy, and declared it was the happiest day of their lives. They begged me to have pity on them, to remain among them and instruct them and their children in the knowledge, love and service of the Great Spirit.

“I promised that a blackgown should visit them, but on condition that the chiefs would engage themselves to put a stop to the thievish practice among them, and to oppose vigorously the corrupt morals of their tribe. Believing me to be endowed with supernatural powers, they had entreated me from the very commencement of our conversation, to supply them with plenty. I repeated to them on this occasion that the Great Spirit alone could remove evils. God, I said, listens to the supplication of the good and pure of heart; of those who detest their sins and wish to devote themselves to his service. But he shuts his ear to the prayers of those who violate his holy law. In his anger, God had destroyed by fire, five infamous villages, Sodom, Gomorrah, etc., in consequence of their horrid abominations — that the Crows walked in the way of these wicked men, consequently they could not complain if the Great Spirit seemed to punish them by sickness, war and famine, and they were themselves the authors of all their calamities — and if they did not change their mode of life very soon they might expect to see their misfortune increase from day to day, while the most awful torments awaited them and all wicked men after their death. I assured them, in fine that heaven would be the reward of those who would repent of their evil deeds and practice the religion of the Great Spirit.

“The grand orator of the camp was the first to reply: ‘Black-gown,’ said he, ‘I understand you. You have said what is true. Your words have passed from my ears into my heart. I wish all could comprehend them.’ Whereon, addressing himself to the Crows, he repeated

forcibly: 'Yes, Crows, the Blackgown has said what is true. We are dogs. Let us change our lives and our children will live.' I then held a long conference with all the chiefs assembled in council. I proposed to them the example of the Flat-Heads and Pends-d'Oreilles, whose chiefs made it their duty to exhort their people to the practice of virtue, and who knew how to punish as they deserved all the prevarications against God's holy law. They promised to follow my advice, and assured me that I would find them in a better disposition on my return. I flatter myself with the hope that this visit, the good example of my neophyte, but principally the prayers of the Flat-Heads, will gradually produce a favorable change among the Crows. A good point in their character, and one that inspires me with almost the certainty of their amendment, is, that they have hitherto resisted courageously all attempts to introduce spirituous liquors among them. 'For what is the fire-water good?' said the chief to a white man who tried to bring it into their country. 'It burns the throat and stomach; it makes man like a bear who has lost his senses. He bites, he growls, he scratches and he howls, he falls down as if he were dead. Your fire-water does nothing but harm — take it to our enemies, and they will kill each other, and their wives and children be worthy of pity. As for us, we do not want it; we are fools enough without it.' A very touching scene occurred during the council. Several of the savages wished to examine my missionary cross; I thence took occasion to explain to them the suffering of Our Savior, Jesus Christ, and the cause of His death on the Cross. I then placed my cross in the hands of the Great Chief; he kissed it in the most respectful manner. Raising his eyes to heaven, and pressing the cross with both his hands to his heart he exclaimed, 'O, Great Spirit, take pity on me and be merciful to thy poor children.' And his people followed his example.

"I was in the village of the Crows when news was brought that two of their most distinguished warriors

had fallen victims to the rage and cruelty of the Blackfeet. The heralds, or orators, went around the camp, proclaiming in a loud voice the circumstances of the combat and the tragic end of the two brave men. A gloomy silence prevailed everywhere, only interrupted by a band of mourners, whose appearance alone was enough to make the most insensible heart bleed, and rouse to vengeance the entire nation. This band was composed of the mothers of the two unfortunate men who had fallen; their wives carrying their new-born infants in their arms, their sisters and all their little children.

“The unhappy creatures had their heads shaven and cut in every direction; they were gashed with numerous wounds, whence the blood constantly trickled. In this pitiable state they rent the air with their lamentations and cries, imploring the warriors of their nation to have compassion on their desolate children — to grant them one last favor, the only cure for their affliction, and that was to go at once and inflict signal vengeance on the murderers. They led by the bridles all the horses that belonged to the deceased. A Crow chief mounting immediately the best of these steeds, brandished his tomahawk in the air, proclaiming that he was ready to avenge the deed. Several young men rallied about him. They sung together the war song, and started the same day, declaring that they would not return empty-handed, i. e., without scalps.

“On these occasions the near relations of the one who has fallen, distribute everything that they possess, retaining nothing but some old rags wherewith to clothe themselves. The mourning ceases as soon as the deed is avenged. The warriors cast at the feet of the orphans and widows the trophies torn away from the enemies. Then passing from extreme grief to exultation, they cast aside their tattered garments, wash their bodies, besmear themselves with all sorts of colors, deck themselves off in their best robes, and with the scalps affixed to the end of poles, march in triumph round the camp, shouting and dancing, accompanied at the same time by the whole village.

REMINGTON.

CHARGE OF INDIAN WARRIORS.



“On the 29th, I bade adieu to my faithful companions, the Flat-Heads and the Crows.

“P. J. DE SMET.”

Of the Crow character, a very singular trait is exhibited in an adventure of a noted trapper, Mr. Robert Campbell, as given in Washington Irving's work “Bonneville's Adventures.” This traveler was on one occasion hospitably entertained by the celebrated Crow chief, Arapooish, in whose tent he had deposited a large bundle of valuable furs. The greater part of his stores was buried in the ground for safety. The old chief ascertained during Campbell's stay that his guest had made a “caché” (the French term applied to such places of concealment) and that some of his own tribe had discovered and plundered it. The number of beaver skins stolen was one hundred and fifty. Arapooish immediately assembled all the men of the village, and after making a speech, in which he vehemently disclaimed against their bad faith toward the stranger, vowed that he would neither touch food or drink until complete restitution should have been made. He then took his seat with the trapper in his wigwam, and awaited the result, desiring his companion to make no remarks if the skins were brought, but simply to keep account of them. More than a hundred of the stolen articles were brought in before night, but notwithstanding Campbell's expressions of satisfaction, the old Indian would neither eat or drink throughout that night and the next day. The skins slowly made their appearance one and two at a time during the day and but a few were wanting to make the number complete. Campbell was now anxious to put an end to the fasting of the old man and again declared that he was perfectly satisfied. Arapooish demanded what number of skins were yet wanting. On being told he whispered to some of his people, who disappeared. After a time the number were brought in, though it was evident they were not any of the skins that had been stolen, but others gleaned in the village.

Arapooish then broke his fast, and gave his guest much wholesome advice, charging him always, when he visited a Crow village, to put himself and his goods under the protection of the chief. Of Campbell's conclusion upon the character of the race, Mr. Irving says: "He has ever since maintained that the Crows are not as black as they have been painted." "Trust to their honor," he says, "and you are safe; trust to their honesty, and they will steal the hair off your head."

The Crows are divided by local usage into the Mountain and River Crows. The River Crows were for a long time divided, a portion of them being at or near Fort Belknap Agency and many roamed. They are now, however, all on the Crow reservation.

In June, 1885, the Crows, at Crow Agency, Montana, numbered 3,226. By occupation they are farmers and herders.

CHAPTER IV.

THE CHEYENNES.

This nation has received a variety of names from traders, the neighboring tribes and the missionaries; as Shyennes, Shiennes, Cheyennes, Chayennes, Sharas, Shawhays, Sharshas, and by the different tribes of the Sioux they were called: Shaiena, Shay-e'-la, or Sha-ey-la. This name was given them because the first Cheyenne the Sioux or Dakota met with wore a robe painted red, and had his body painted the same color,—sha being the Sioux word for red. They call themselves Sa-Sis-e-tas, and some of the tribe say that this means "the cut or slashed arm."

Their traditions and myths, which, by the way, are many, seem to point in a very faint way, to their original location as far east as Niagara Falls, but there is no evidence of their migration westward from any place farther east than the Cayenne river, a branch of the Red River of the

North, in Minnesota. "I was first inclined," says Captain Clark, "to think that the great prominence given to their myths and stories in regard to the first buffalo — some of them commencing with: 'Before we had buffalo' — indicated that it must have been at a comparatively recent date that they reached the buffalo country. But as the same stories are told with more exactness, even in regard to the bows and arrows, I was compelled to give up any theory or views I held on the subject and accept as a fact the answer made by a very old man and former chief (he was seventy-nine years old) to my question as to where they were before they lived in Minnesota. 'The Great Spirit made us right there.' Occupying then the country at the head-waters of the Mississippi and on the banks of the Red river, several hundred years ago, they were slowly being forced westward by the Sioux; perhaps southward by the Mandans; the latter being driven from the north by the same power which pressed upon the Sioux, viz.: the great Algonquin family, assisted in after years by the French arms. It is more than probable that their migration was due in a measure to and determined by their search for game, as traditional evidence in regard to their relation with the Sioux and Mandans is not clear and conclusive. (Lieutenant Baily, 5th Infantry, obtained, from what he considered reliable source, information which went to show that the Sioux and Cheyennes were never regularly at war, but had frequent misunderstandings and difficulties with each other, and that the Cheyennes met the Mandans two hundred and fifty years ago as they, the Cheyennes, crossed the Missouri river. For several years they were at war with the Mandans, after this made peace, and have maintained peaceable relations ever since. Before the whites made war against these tribes they frequently camped together, and many Cheyennes and Mandans intermarried)."

After crossing the Missouri they settled, or pitched their tepees, on the banks of the Good river, which was afterwards called by the fur traders the Cheyenne river. Here

Lewis and Clark met them in 1803. The first treaty they made with the United States was made in 1825, at the mouth of the Teton, or Bad River, Mr. Drake estimated their number then to be about 3,250.

They never had any ponies till they reached the foot-hills around Bear Butte. The Crows roamed then over the country along the foot-hills, from the present site of Rapid to the Little Missouri, the Powder and Tongue river country. The Kiowas and Apaches were southwest of and near the Black Hills, while the Pawnees occupied the Lower-Platte valley. Some claim that the Arapahoes first secured a pony and others say that a Mexican gave one to one of their chiefs. Be that as it may, the Cheyennes soon after their arrival near the Black Hills heard of the people who had ponies and wild horses and lived on the plains to the south. Instead of making a living by tilling the soil as they had done in their former home, they commenced to drive the Crows, Kiowas, and Arapahoes out of the country, catching wild ponies and stealing them from the tribes south and west of the hills. Keeping in a northwesterly direction they drove the Crows before them, took possession of the country and roamed about near the head-waters of the Little Missouri, Powder, Tongue and Rosebud rivers. During the time of Long's expedition to the Rocky Mountains, in 1819 and 1820, a small portion of the Cheyennes seem to have separated themselves from the rest, due to a desire to join the expedition, and also to increase their supply of ponies by trade and theft from the tribes to the south. A complete separation between the Northern and Southern Cheyennes took place in 1840.

Speaking of their migration from the Black Hills to the Big Horn Mountains, and from there to the Platte and Arkansas river, Whirlwind, of the Southern Cheyennes said: "We roamed about the country, moving down to the White Earth and Platte rivers. The time of the great gathering on Horse Creek, near Fort Laramie, Wy., when all the tribes got together, — Crows, Snakes, Arapahoes, Sioux, — all up there, and goods were distributed to us, may

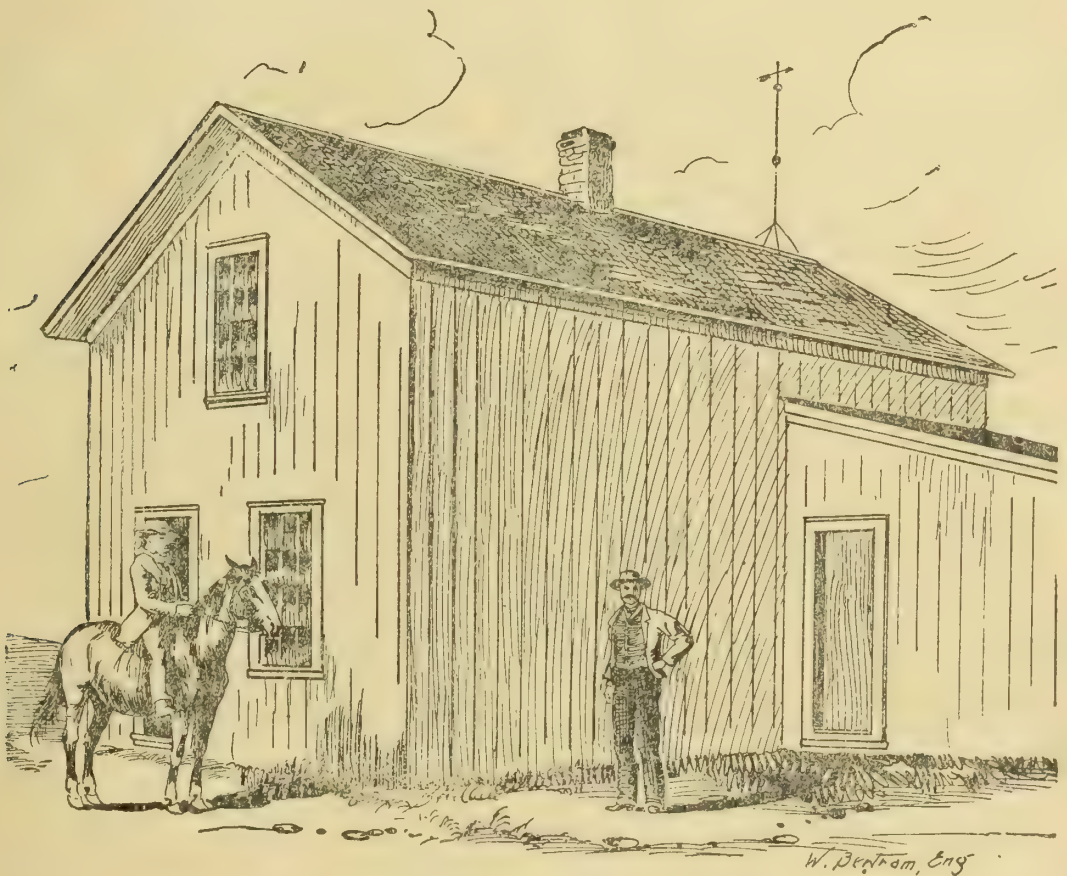
be taken as the time when we separated from the Northern Cheyennes. We drifted apart. We used to come together at times but not just like one people. We would go north and live with the Northern Cheyennes, and they would come south and live with us, but this was only for a short time. We were like two different tribes, only we spoke the same language and had the same habits and customs."

Four chiefs formerly ruled the Cheyenne camp. They were selected for their bravery, wisdom, good judgment and generosity to the poor. A grand council was called, and a large tent pitched to hold it in; sometimes making the council-lodge out of several common tepees. Four sticks were driven in the ground inside of the lodge, representing the four head men of the tribe. Four very old men, usually those who at different times had held the position of chiefs, were selected to go and bring in the four men who were to be made chiefs, if they were not already present. Four pipes were filled and placed on the ground near the sticks; these were taken up and lighted by the old men and held to the newly-made head-men, who took a few puffs while the pipes were still in the hands of the old men. Should one of the four be killed, die of disease, or, through public sentiment, be, as they say, thrown away, the other three acted; and so on until only one was left, when a council was called, and four others made. An election, if this can be so named, was never called to elect one or two, but always four. These four decided all the matters of minor importance, and they usually selected one of their number to act as chief. Any question of vital importance, such as declaring war or making peace, was decided on in general council. At the election only a few prominent men from each of the soldier-bands were present. They had five such bands, viz.: Strong Heart, Dog, Fox, Smooth Elkhorn and Swift Tail

Running through all the stories, legends and myths of the Cheyennes, the number four seems to possess a magical influence for good luck. Four halts are made before they charge in the preliminary march of the Sun-Dance,

four times is the covering of the medicine sweat-house raised, and four winters they starved according to the following story, which is often repeated as a warning against quarreling: "Long, long ago an old man and a young man got into a dispute over a buffalo skin, and the old man knocked the younger one senseless with the leg of a buffalo. Near by was a fire, upon which an old woman had placed a large clay kettle filled with water and buffalo meat, around which a large number had gathered. When the young man fell, the kettle was upset, the water run out over the fire, creating a great deal of smoke, steam and dust. During the disturbance the young man disappeared; was not seen again for four winters. At the end of that time he appeared on an eminence near camp, having a buffalo's lower jaw fastened to each of his heels, and holding a peculiar lance in his hands. As soon as he was discovered he again disappeared behind the hill. In a very short time he appeared on the hill again with a different kind of lance, and a bunch of hair tied to each leg (the long hair that grow on the buffalo's neck). He disappeared a second time and again reappeared with a different lance in his hand, a buffalo head for a head-dress and some of the skin hanging down on each side; he disappeared again, and again reappeared with a small round war bonnet, one with no trail, and with a painted stripe across his body, which was naked. He then disappeared and was not seen for four winters. In the meantime fierce-eyed, wretched and cruel starvation seized the Cheyenne camp; all game disappeared, roots and berries did not grow. Some were so hungry that they ate dirt. One day in the early spring some little boys were out hunting with hungry eyes, digging with wasted hands for something to eat, and, finding some mushroom, devoured them. Whilst they were eating these the young man appeared to the boys, having in his hand four arrows, and told them that as they were hungry he would give them something to eat. It was dried buffalo meat pounded fine. He then told the boys to go to the camp and tell their

people to pitch a big lodge with the door toward the rising sun, and that when this lodge was pitched he would show himself to them; he would go into the lodge and sing to them, and would again bring game into the country around them. The lodge was pitched, the young man appeared, the boys recognized him and cried out: 'There comes the man.' He came toward the lodge, around which the people of the camp crowded, crying and holding their hands up



CHIEF RED CLOUD'S HOUSE AT PINE RIDGE AGENCY.

toward the Great Spirit. He walked around the people to the left, and entering the lodge at the door, remained within for four days and four nights singing; at the end of the fourth night he unrolled the arrows which he had in a bundle, and immediately after the buffaloes swarmed about the camp, bellowing and pawing the earth, some even went into the big lodge and were there killed. The young man then said that he was going away, but that before he left he wanted a beautiful young woman who was in the camp. The

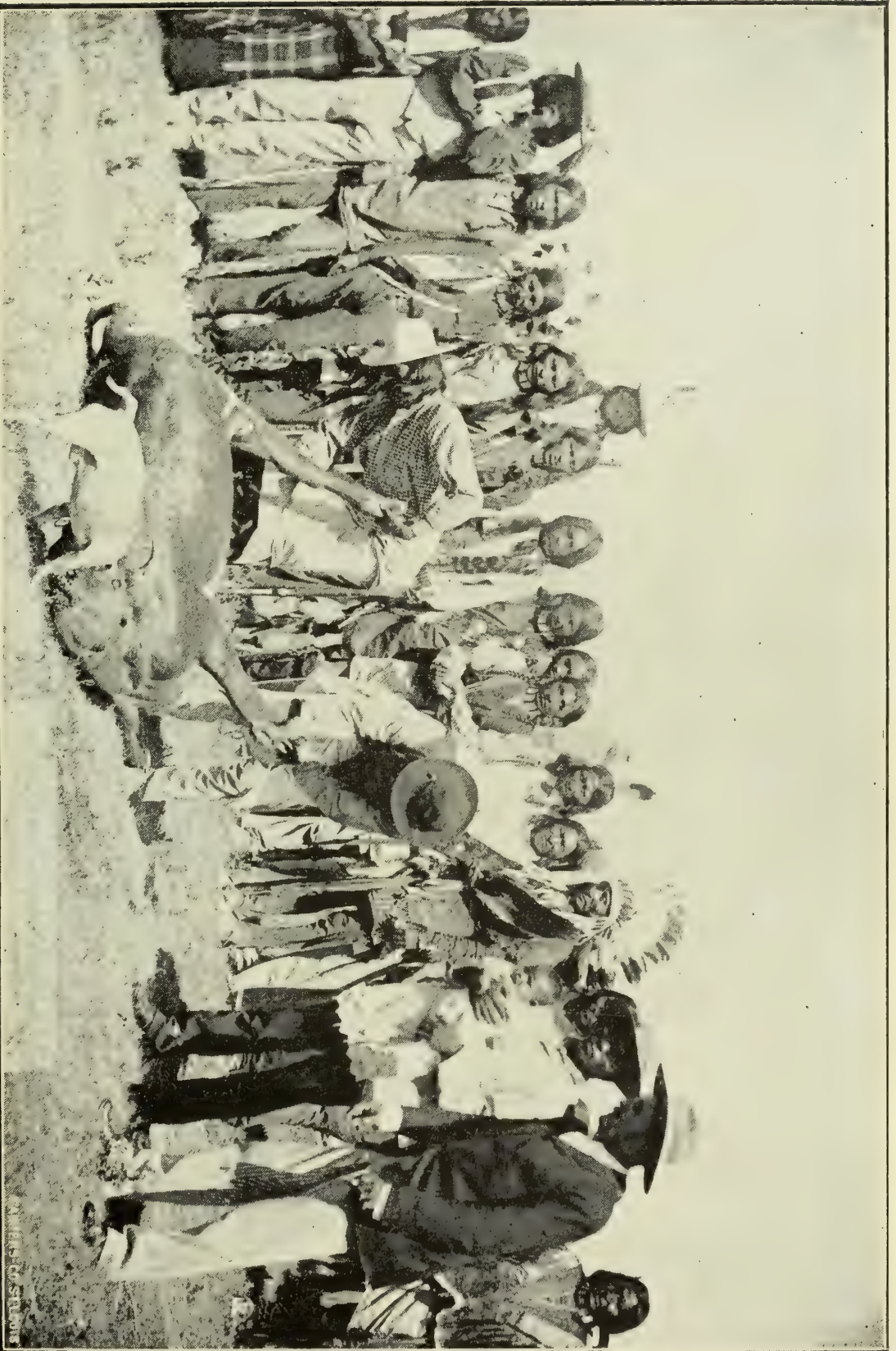
woman was given to him and he went away, and has never been seen since. Our people thought he got these sacred arrows from Bear Butte, and that he went back there. Game was plenty, and roots and berries grew in abundance, and many kinds of fruit that before this time we had known nothing about. Before going away the young man told us many things, explained to us how to live, and said that instead of being one of our people he was a god. He said that there were people in a far-off country where the sun rises; that he made those people, and that they were his; that after a time we would see and meet with them; that they would come to our country; that there were a great many of them and they would overpower us, would kill our game, eat and destroy our fruit, and finally they would get so numerous that we would find them on every stream. He told us that the big game would come from the north where it was cold, and ponies from the south where it was warm. He told us to eat wild fruit and wild game, and in that way we would be healthy and happy. He told us that the people who came from the rising sun would have a different kind of food, and said that this would not be as good for us as what we would find on the prairie." White Bull, one of the Indians present when the story was told, told Captain Clark that it made his heart heavy and sad to think of these things, the spoliation of their country, the driving away of all the game and the crowding out of existence of his people. Once they were happy, had a country of their own, game, and all they wanted to make them happy; now they were poor and broken and separated, and some of their people had been sent away to die in a strange land.

The story of the first white man seen by the Cheyennes, though possessing no special merit, still throws some light upon the Indian thought, and gives their version of the treatment the whites received at their hands. "Long ago," said Black Pipe, "the Cheyennes were camped near a lake beyond the Missouri river; they made fire with two sticks, which was hard work. The women used porcupine quills for needles in sewing. We had stone vessels to cook

in, stone knives and stone points to our spears and arrows. The Great Spirit had given us the bow and arrow to kill game with. One morning a Cheyenne and his wife, awakening from their sleep, saw a strange creature in their tepee. The woman was frightened, and was about to cry out, but was quieted by the husband, while the strange being rose slowly and feebly to a sitting posture. He was so thin that he had scarcely any flesh on his bones, and for clothing had only some moss and grass. He was very near dead. This creature looked somewhat like a Cheyenne, but he had a white skin and a strange language. The Cheyenne gave him something to eat, but at first he was so weak and exhausted that his stomach would not hold it; yet after a little while he grew stronger. The Cheyenne told his wife to keep the matter secret, as some of the others might kill this strange being, believing he would bring them bad luck; but, as the camp was moving one day, the others discovered him, and there were a great many talking at once about him and of him. The Cheyenne in whose lodge the man had been found said that he had taken him for a brother, and if any one harmed him he would punish them; and that he believed the Great Spirit had sent this man to do them some good. Well, the Cheyenne clothed him, fed him, and so led him back to life. After a time the man talked the language of the Cheyennes, and made signs so that we could understand him; and then he told his story. He said he came from the land of the rising sun, and that his people were powerful and numerous, and had many good things which the Cheyennes did not have; that he, with four others, had started out to trap the beaver, and when on the lake in a boat the wind came up suddenly, overturned the boat, and drowned the others; and that he had wandered about, living on beaver until all his clothes had been worn out and scratched off, when, in a blind and dazed condition, nearly dead with hunger, he had wandered into their camp and fallen into his lodge. He said his people were fond of beaver-fur, and that if we would get some, a number of dog-loads, and give to him,

he would go to his people and give them the fur, and get in return needles for the women to sew with, knives to cut with, guns to kill game with, and steel to make fire with. The furs were given him, and he, with his dog-train, departed, and was gone nearly a year, when one bright, sunshiny day a loud noise, like thunder, was heard near the camp, and on a bluff near the village the white man was seen. He distributed the things he had brought, — knives, needles, steel, and showed us how to use them; as well as the black powder and hollow iron with which he had made the noise that sounded like thunder. This man wore at the time a red jacket and a red cap. He said he could kill anything with his hollow iron. They were incredulous and set a man before him to prove his assertion. He declined to practice on a human being, and they brought a dog, when he turned his gun toward it and shot it dead. The Indians were terrified beyond measure and called him ‘Thunder.’ ”

As a tribe the Cheyennes have been broken and scattered, but in their wild and savage way they fought well for their country, and their history for many years has been written in blood. Innocent settlers have suffered cruel outrages at their hands; women and children have gone down to horrible deaths, through their revengful rage, and burning houses have lighted their pathway of devastation. They in their turn have been hunted like wolves, and shot down like mad dogs, until they are now only a wreck of their former greatness. The numerous wars against them with their attending cruel horrors were perhaps only the legitimate fruit of bad policy and mismanagement of Indian affairs, or willful indifference to or misunderstanding of the circumstances and condition of the Indians, and their relation to the Government, which in times past has too often permitted dishonest agents to be the intermediaries between the Government and them, and through weakness or cowardice has at times paid more heed to the clamors of rapacious miners and settlers of the white race than to treaty obligations and plighted faith with the Indians. At any rate it seems certain that the



CHEYENNE INDIANS SKINNING BEEF.

Cheyennes were at first friendly to the whites, and that they subsequently became one of the greatest terrors of the frontier. The men of the Cheyenne Indians rank as high in the scale of bravery, energy and tenacity of purpose as those of any tribe, and in physique and intellect they are superior to those of most of the other tribes and the equal of any. Under the most demoralizing and trying circumstances they have preserved in a remarkable degree that part of their moral code which relates to chastity, and public sentiment has been so strong with them in this matter that they were and are still noted among the tribes that surround them for the virtue of their women. In dress and general appearance they differ but little from the Arapahoes and Sioux.

Up to 1862 the Southern Cheyennes were generally friendly to the white settlers when outbreaks occurred, and then for nearly four years a costly and bloody war was waged against them, a notable feature of which was the Sand Creek or Chivington massacre, November 29th, 1864. In 1867, General Hancock burned the village of the Dog soldiers on Pawnee Fork, and another war began in which General Custer defeated them at Washita, killing Black Kettle and thirty-seven others. The wars continued till February, 1869, when they were captured and brought to Camp Supply, Indian Territory. They were, however, a constant source of anxiety to the military commanders, as a portion of them held out. Finally in March, 1875, the remainder of the Southern Cheyennes surrendered under Chief Stone-Calf at Fort Sill and went on their present reservation in the Indian Territory. During the summer of 1885, they and the Arapahoes became restless and rebellious. Stone-Calf, Flying-Hawk, Little-Robe and Spotted-Horse as chiefs, led the Dog soldiers, whose band was increased by a number of squawmen. United States troops were hurried to Fort Reno near the Cheyennes and Arapahoes Agency, Indian Territory, and by a strong show of force a serious outbreak was prevented. The principal reason for the attempted revolt and raid was that the agent

and Government desired the Indians to work, either as farmers or as tradesmen. Lieutenant-General Sheridan assumed command in person and there was no further trouble.

The Northern Cheyennes were constantly on raids from 1867 up to the year 1876. In that year they joined the Sioux and aided in the massacre of Custer, on the Rosebud, in June of the same year.

In 1877 they surrendered to the United States, and were first sent to Fort Robinson, Nebraska, and finally to the Indian Territory, and placed on a reservation with the Southern Arapahoes, at Fort Reno, August 8th, 1877. They numbered about one thousand when they surrendered. September 9th, 1878, about one-third of them escaped from Fort Reno, and under the leadership of Dull-Knife, Wild-Hog, Little-Wolf, and other chiefs, started north to rejoin their friends in the country where they formerly resided. The U. S. Army pursued them, a running fight ensued, resulting in the killing of many soldiers, and the massacre by the Indians of settlers, men and women. They were finally captured in Nebraska in October, 1878, and ordered to return to the Indian Territory. In January, 1879, being then at Fort Robinson, Nebraska, they arose in a revolt and many of them were killed. The remainder were returned to the Indian Territory. In 1881 and 1883, under authority of an act of Congress, they were removed to Pine Ridge Agency, South Dakota, where they now are.

CHAPTER V.

THE SIOUX.

The title Sioux, which is indignantly repudiated by the nation; is either the last syllable or the last two syllables, according to pronunciation, of "Nadowesieux" which is the French plural of the Algonquin name for the Dakotas.

“Nadowessi” means enemy, though the English word is not so strong as the Indian, “hated foe,” being nearer. The Chippeways called an Iroquois “Nadowi,” which is also their name for rattlesnake (or, as others translate it, adder), in the plural Nadowek. A Sioux they called Nadowessi, which is the same word with a diminutive or contemptuous termination; plural, Nadowessiwak or Nadowessyak. The French gave the name their own form of the plural, and the voyageurs and trappers cut it down to Sioux.

Charlevoix, who visited Wisconsin in 1721, in his history of New France says: “The name Sioux that we give to these Indians is entirely our own making, or rather it is the last two syllables of the name of Nadouessioux, as many nations call them.”

Hennepin in August, 1679, in the vicinity of the Falls of Niagara, met the Senecas returning from war with the Dakotas, and with them some captive Tintonwans or Tetons.

A letter written at Fort Bourbon, on Hudson Bay, about 1695, remarks: “It is said that the Assinniboinis are a nation of the Sioux, which separated from them a long time ago.”

Lieut. G. R. Warren, in his report to the Government in 1857, says: “The Dakotas are scattered over an immense territory, extending from the Mississippi on the east to the Black Hills on the west, and from the forks of the Platte on the south to Devil’s Lake on the north. They say their name means ‘leagued’ or ‘allied,’ and they sometimes speak of themselves as the ‘Ocheti Shaowni,’ or ‘Seven Council Fires.’ These are the seven principal bands which compose the nation, viz: —

“1. The Mde-wakan-tonwans, meaning ‘Village of the Spirit Lake.’

“2. Wah-pe-kutes, meaning ‘Leaf-Shooters.’

“3. Wah-pe-tonwans, meaning ‘Village in the Leaves.’

“4. Sisi-tonwans, meaning ‘Village of the Marsh.’

“These four constitute the Mississippi and Minnesota

Dakotas, and are called by those on the Missouri ‘Isanties.’ They are estimated at 6,200 souls.

“ 5. Ihanktonwans (Yanktons), ‘Village at the End.’ These are sometimes called Wichiyela, meaning ‘First Nation.’ They are found at the mouth of the Big Sioux



SPOTTED TAIL.

and between it and the Missouri river, as high up as Fort Lookout, and on the opposite bank of the Missouri. They are supposed to number 360 lodges.

“ 6. Ihanktonwannas (Yanktonnas), meaning one of the ‘End Village’ bands. They range between James river and the Missouri, as high north as Devil’s lake, number

about 800 lodges, and are spirited and warlike. From the Wazikute branch of this band the Assinniboins, or Hohe of the Dakotas, are said to have sprung.

“ 7. The Titonwans, ‘Village of the Prairie,’ are supposed to constitute more than one-half of the whole Dakota nation. They live on the western side of the Missouri, and extend west to the dividing ridge between the little Missouri and Powder rivers, and thence south on a line near the 106th meridian. They are allied by marriage with the Shyennes, but are enemies of the Pawnees and Crows. The Titonwans, except a few of the Brulés, on White river, and some of the families connected with the whites by marriage, have never planted corn. They are divided into seven principal bands, viz.: —

“ 1. Unkpapas, ‘they who camp by themselves.’ They roam from the big Shyenne up to the Yellowstone, and west to the Black Hills; to this band Mato Chiqukesa, or the Bear’s Rib, belongs, who was made by General Harney the first chief of the Dakotas. They number about 365 lodges.

“ 2. Sihasapas (Blackfeet). Hunts and homes same as the Unkpapas. They number 165 lodges. These two bands have very little respect for the power of the whites.

“ 3. Itazipchos. (Sans Arc, ‘no bows.’) Roam over nearly the same territory as the Unkpapas. They number about 170 lodges. It is difficult to say how these bands received their present names; the Itazipchos being as well provided with bows as any other band, and use them as skillfully.

“ 4. Minikanyes or Minni-kan-jous (meaning ‘they who plant by the water’). They number about 200 lodges, and roam principally from the Black Hills south to the Platte. They are generally well disposed toward the whites.

“ 5. Ogalalas or Okandandas. They number about 460 lodges, and are generally to be found on or near the Platte near Fort Laramie. They are the most friendly disposed toward the whites of all the Titonwans.

“ 6. Sichangus (meaning Burnt Thighs), Brulés. They number about 380 lodges, and live on the Niobrara and White rivers, and range from the Platte to the Shyenne. They include the Wazazhas, to which belonged Matoiya (the Scattering Bear), made chief of all the Dakotas by Colonel Mitchell of the Indian Bureau, and who was killed by Lieutenant Grattan.

“ 7. Oo-he-non-pas (Two Boilings, or Two Kettle Band). These are now very much scattered among other bands. They number about 100 lodges. Some of them are generally to be found in the neighborhood of Fort Pierre.

“ The Dakotas, on and west of the Missouri, which includes all but the Isanties, are the only ones I have heard estimated. I should think eight inmates to a lodge, and one-fifth of them warriors, an ample allowance. We would then have 3,000 lodges, with 24,000 inmates and 4,800 warriors.”

In 1775 Standing-Bull, the great-grandfather of the present Standing-Bull, discovered the Black Hills. He brought back to White river a large branch of a pine tree, a tree not seen by the Indians before, except by a few very old men in the eastern parts of the great prairies, near the lakes.

Red Cloud, whom I asked at the Pine Ridge Agency about the time of the coming of the Sioux to the Black Hills, said: “ My ancestors came from the smoky country far, far off — to the rising sun; my grandfather was born east of the Missouri river and he died west of it. My father was born west of the Missouri river and I was born near the mountains. Often did I climb, when a boy, up to the top of Bear Butte.” I asked him about the stones placed in the branches of trees on top of the Butte and he said that by placing these stones thus the different tribes showed by the number of stones what claim they had on the country.

“ Yes,” said he, “ we came from the rising sun; we drove ahead of us to the setting sun all our enemies: the Komaches and Kiowas, the Crows and the Cheyennes. With the

Cheyennes we were mostly on friendly terms, but the Crows are our enemies.”

He stated further that his people knew since 1800 that there was gold in the Hills. When he was a young boy his people killed three white men close to the Hills.

CHAPTER VI.

RELIGION.

Aboriginal Idea of Religion.

In Schoolcraft's History of Indian Tribes, Mr. Gideon H. Pond gives the following interesting account of the religious idea of the Aborigines: “Deism, probably, exists in no purer form among the uncivilized nations of mankind, than it is found in the abstract beliefs of the North American tribes. The Indian is, psychologically considered, a religious being. His mental organization leads him to trust in the power of a deity. He is a believer in the mysterious and wonderful. Every phenomenon in nature which he can not explain is the action of a god. The clouds in their varied display, are invested with the sublime symbolic teachings of a god. God is everywhere present. The thunder and lightning, and the brilliant auroral displays of the hemisphere, are identified as manifestations of the power of God, who is the great creative spirit.

“The Indian's ear is open to his teaching in every sound of the forest. Living, as he does, in the open air, his eye is familiar with the face of the heavens, which are spread out before him, as a vast volume of pictography, in which he reads wonderful things. He sees a supernatural power in all these surroundings, telluric and sublime ethereal manifestations. He fills the universe with scintillations of the deity; and appears to realize the idea of a Jacob, who, after rising from his stone pillow at Bethel, acknowledges

the local presence of Jehovah, by the remark — ‘surely the Lord is in this place, and I knew it not.’ (Gen. XXVIII. 16.)

“ That there exists a unity in this idea of a Great Spiritual existence, who made all things, and governs all things, even to the minutest destinies of men, is apparent to those who closely scrutinize the Indian, and direct their attention to the objects of his hopes and fears. While looking directly to the Great Spirit for success in life, and acknowledging life and death, fortune and misfortune, as due to his supreme power and omnipresence, his mind has been strongly impressed that there is also an evil influence in this world. To account for this, without impugning the benevolence and goodness of God, an antagonistic god is believed in, who is the author of evil. Thus, there are two gods created in the Indian theology, which most strongly remind the observer of the ancient Persian system of Ormusd and Ahriman; for while, like the ancients, ascribed to the former all good and benevolent acts, the latter is regarded as the potent power of malignancy.

“ The primary term for the deity is still retained by the Indians; but they prefix to it an epithet, signifying good or bad. In this manner, there is created a duality of gods, rather than a dual deity. It is impossible, however, to witness closely the rites and ceremonies which the tribes practice in their sacred and ceremonial societies, without perceiving that there is no very accurate or uniform discrimination between the powers of the two antagonistical deities; while the benignant power, which accords life and death, is regarded as possessing the spiritual mastery.

“ It was not enough for the founders of the Indian religion to generalize the powers of good and evil, by creating in their theology, two gods. To enable these diverse gods to exercise their powers in a certain conceivable god-like manner, each is provided with an innumerable host of minor gods, or spirits, who, under the shape of birds, beasts, reptiles, men, angels, demons, giants, dwarfs, sorcerers, enchanterers, fairies, pigmies, and

other forms, inhabit the world. These are classified into malignant and benignant spirits, or semi-gods, agreeable to the deity under whose influence they are sent abroad.

“Imagine the diverse influences which are now placed before the Indian’s mind and heart. What sources of vivid hopes and fears? A fast and absolute power, nothing is too astonishing, mysterious, and subtile for him to believe or doubt. Everything he sees or hears in the animate world may be the subject of intense fear or hope; he is perpetually in doubt which. He is a ready believer in transformations, possessions and incarnations. A deer, a bear, or a swift-flying bird, may be the messenger of good or evil. He is constantly on the qui-vive, but especially on the lookout for something untoward. The movement of a bush, or the voice of a wild animal, may be as premonitory a sign to him as the roar of Niagara, or a clap of thunder. This is not yet the extent of his susceptibilities to mysterious fears,—he is not only a believer in the influences of magic, sorcery, and necromancy—he is not only on the constant watch, through these, or other sources, for hosts of good or evil spirits—but all these influences may be exhibited or excited through the violent powers of invisible and invulnerable agencies.

“God in revealing himself to Moses, said to him, ‘Put off thy shoes from off thy feet, for the place whereon thou standst is holy ground.’ It has not occurred to the Indians, nor their unknown ancestors, from whom we may suppose them to have derived their religion, that God should be represented to be holy. Yet it admits of no question, when properly viewed, that the Great Spirit of the Indian is a purer deity than the Greeks or Romans, with all their refinements, possessed. For the Indian, by his system of a dual-deity, or two separate persons, is careful to guard his good and merciful god from all evil acts and intentions, by attributing the whole catalogue of evil deeds, among the sons of men, to the bad spirit of his theology. His Manito, Owayneo, or Wacondah, is thus kept intact. He neither interferes in wars, hunting, domestic life, or love, further

than is required to exhibit his controlling and innate goodness, purity of will, and benevolence to the human family. He lifts his voice to him in supplication, in his native forests, without temple or formality; and when he offers a sacrifice to such a deity, it is not a roasted quadruped, such as so often smokes on the altar of the other deities of the wilderness, but in the light and curling fumes of tobacco.

“ It is not so much, it is apprehended, in the theory of the Indian mind on this topic, that he is mistaken, as in his failure to make men understand it. And when he peoples space with his multitudinous loci dei, the fear on his mind is not, clearly, that the Great Spirit exists no more, or does not uphold his government, as that he has, to employ the language of the Psalmist, ‘ forgotten him,’ and needs, by these subtle agents, to be put in remembrance of man whose life is, he daily and deeply feels, one tissue of vicissitudes. Hence the opportunity that occurs for the class of medas, priests, jossakeeds, seers, sorcerers, or jugglers, who rise up in every tribe, with the pretense of superior wisdom or skill. It is this class of impostors, who are too lazy to hunt and too wicked to be usefully industrious, that keep the Indian mind in turmoil; and are really, by far, the most formidable obstacles that the teacher and the missionary has to encounter. It is this class of men, who are mere demoniac agents of Satan, that revel in the doctrine of polytheism, introduce confusion in the Indian’s mind, between the boundaries of the good and evil power, and keep it on the torture, by setting one class of the spirit-gods at war with the other. These local gods of the air, woods, and waters, are striving perpetually for the mastery among each other, and among the human race. They are, in fact, from the theory inferred from their legends, nothing but so many demons, filling the Indian world with discord. They come down into the forest, and animate wolves, bears, turtles, and various quadrupeds and reptiles. They direct the flight of birds, who, living much in the air, are deemed to be peculiarly subject to these

spiritual teachings. As this animal incarnation, so to call it, is the only form of deity with which he can come into actual or personal contact, he selects his guardian spirits from them. And when this process, which is very ceremoniously done, with dreams and revelations, has been accomplished, they communicate with him, and indicate the will of the Great or Bad Spirit to him in dreams, which are carefully sought in fasts and abstinences, often excessively protracted. He hangs up offerings to those deities



OMAHA DANCE. ROSE BUD AGENCY.

on poles before his wigwam. Thus he worships not the Great Spirit, who is perpetually on his tongue, but this class of tutelar intercessors, or mediums, who are firmly relied on.

“ He is not, evidently, satisfied with these tutelar spirits alone. Distrustful of their power, or his own faithfulness to them, there are in all the tribes, a class of diviners, to whom it is believed the power and will of the Great Spirit is peculiarly revealed. These persons are believed to be more holy than others. They pass more time in fasting in secret, and studying to make themselves mediums of God’s

will. They are called variously pow-wows, soothsayers, prophets, jossakeeds, and by other names. The tribes firmly believe in them, rely on their predictions in every exigency, and are essentially swayed by them. The Indian is a man who emphatically and positively relies on the indications of dreams, which are believed to be inspired by the guardian spirit. His dreams are his revelations.

The Great Spirit is, indeed, still enthroned in his mind, as the creator and preserver of the universe; but he is shorn of his power by these myriads of local gods and spirits, who mediate between him and them. He is, in fact, a negative being — negatively good. Goodness and mercy are the two great attributes ascribed to him. They are relied on by the hunter and warrior, through the mediation of the guardian spirits, in every situation in life and in death. And he dies with the faith of his ancestors on his lips and in his heart, believing that all good hunters and brave warriors will be received into the happy hunting grounds — the Indian's paradise. It is a theory of the Indian that the evils and trials of this life are, as it were, a merit roll, compensation, or sort of expiation made to the Great Spirit for the gift of life, and its many abuses and crimes, of which their consciences make them sensible. And that, in a future state, man shall be admitted to an easier life. Hence death to him is not fraught with terrors; it is rather a state full of attractions. Hell is a foreign word to the Indian mind and language; although a compound word, Maji-monidonong (place of the bad Spirit), has been coined for it. Hence it is that the peculiar doctrines of Christianity, which vindicate the justice, as well as the goodness and mercy of God, are so distasteful to the Indian mind.

He is not a man, however, when he begins to reflect, to admit that his deeds have been evil; nor is the doctrine of a mediator a very strange one to him, when his mind is once enlisted on this theme. His local spirits have been his mediators. He has, in fact, been all his life resorting and trusting to spirit-intercessions and local mediators, through the system of guardian spirits, and dreams and

fasts. But his understanding is slow to perceive that these beliefs of his youth and age are not true; and his unassisted reason is not sufficient to show him that there should be an acceptable mediator, of divine appointment, whom God will recognize and accept. For he, so far as we can judge, deems man justifiable per se. It is, unquestionably, a conclusion justified by observation, that the tone of the Indian mind, when once arrested in its wild career, is penitential. The difficulty is to get him from under the influence of the medicine-man, his priest. He is not, it is true, of a very hopeful temperature; feeling almost everything, hoping almost nothing. Generally, the Indian mind is prone to be pensive and desponding when at rest and free from external impingement, allurements, and temptation to indulgence; and were it not for the continued influence of the native teachers and false prophets, it does not seem probable that it could, in the present peaceful and prosperous state of the country, long successfully resist Christianity."

CHAPTER VII.

INDIAN DEITIES.

The most prominent characteristic of the Dakota deities, is that which they express by the word Wakan. This word signifies, generally, anything which a Dakota cannot comprehend. Whatever is wonderful, mysterious, superhuman or supernatural is wakan. The generic name for gods is Tahuwakan, i. e., that which is wakan. The Dakota sees a god in everything. The chief, and perhaps the only difference that exists among the ten thousands of their divinities, is, that some are wakan to a greater, and others to a less degree; some for one purpose and some for another; but wakan expresses the chief quality of them all,—the only quality, I believe, which the Indian deifies.

As specimens of the supernatural beings, whom it is believed preside over the destinies of the Dakotas, and whose wakan qualities are imparted to the medicine-men, I will mention a few classes of the most respectable of them.

I. The Onkteri (Onk-tay-he), god of Water. In their external manifestations this class of gods resemble the ox, but are very large. They can instantaneously extend their tails and horns so as to reach the skies, and these are the seats of their power. They are male and female, and propagate their kind like animals, and are mortals; which is true of all the gods of the Dakotas. It is believed that the earth is animated by the spirit of the Onkteri goddess, while the water and the earth beneath the water is the dwelling place of the male god. Hence the Dakotas, in their addresses to the water in religious acts give to it the name of grandfather, and that of grandmother, to the earth. The Onkteri have power to issue from their bodies a mighty wakan influence, which is irresistible and which the Dakotas term tonwan. They say that this god and its associates are seen in their dreams. It is the master-spirit of all their juggling and superstitious belief. From it the medicine-men obtain their supernatural powers, and a great part of their religion springs from this god.

II. Cha-o-ter-dah, the god of the forest. This god lives in a tree that grows on the highest eminences and his house is at the foot of it. When the god wants anything he leaves his house and sits on a branch of the tree, which they say is as smooth as glass. By his power of attraction, he draws around him all the birds of the forest, who act as guards and sentinels, and inform him when any thing approaches his residence, that he may prepare for defense. This god and the god of thunder are mortal enemies, and often have severe combats, in which the latter is most generally worsted. When the god of thunder comes racing along, casting his lightning at the tree, in expectation of killing the god of the forest, the latter having been timely informed of his approach by his

faithful sentinels, has retired to the water below. The god of thunder sends his lightning after him at the foot of the tree, but coming in contact with the water it is lost. The god of the forest then ascends the tree, and hurls his lightning with much skill and force at the god of thunder, so as to bring him down a victim at his feet. There being a great many gods of thunder, the killing of one, now and then, does not exterminate them. The god of the forest being considered superior to the god of thunder the latter seldom attacks the former, but passes his abode at a great distance. The Dakotas say that thunder is a large bird flying through the air and the noise we hear is the fluttering of the old and young birds. The old one is wise, and will not injure the Indians, but the young ones are foolish and do all the mischief they can. The name of the thunder-god is Wah-keen-yon and signifies flyer.

III. The Wakinyan (Wah-keen-yon). The name of this class of gods signifies flyer, from the verb *kingan*, to fly. As the night hawk produces a hollow, jarring sound by a peculiar motion of the wings, so the Wakinyan produces the thunder which the Dakotas denominate "the voice of the Wakinyan." It is said by some that there are three varieties of the external manifestation of these gods, and others say that there are four varieties; in character they are, however, but one. One of these varieties, in form is black, with a very long beak, and four joints in each pinion; another is yellow, beakless, and has also four joints in each pinion, but only six quills; the third, which is of scarlet color, is remarkable for the length of its wings, each of which contains eight joints; and the fourth is blue, globular, and has no face, eyes, nor ears; but immediately above where the face should appear, is a semi-circular line, resembling an inverted half-moon, from below which project two chains of lightning, which diverge from each other as they descend. Two plumes, like soft down coming out just above the chains of lightning serve for wings. Each of these varieties represent a numerous race. The Wakinyan created wild

rice, and one variety of prairie grass, the seed of which, in shape, bears a strong resemblance to rice. At the western extremity of the earth (which is a circular plain surrounded by water) is a high mountain, surmounted by a beautiful mound, on the summit of which is the dwelling place of Wakinyan. Watches are stationed at each doorway of their dwelling, one of which opens towards each of the four cardinal points. A butterfly stands at the east opening, at the west a bear, a reindeer at the north, and a beaver at the south. Except the head each of these watchers is enveloped in scarlet down.

The Wakinyan are ruthless and destructive in their character, and they ever exert their mighty power for the gratification of their ruling propensity, at the expense of whatever may come in their way. The enmity which exists among all the classes or races of the gods, is like that which is seen to exist among the different Indian tribes; but the Wakinyan and Onkteri bear a particular hatred to each other, which is hereditary and deep-rooted, like that which exists between the Dakotas and Ojibwas, and neither can resist the tonwan of each other's wakan. It is unsafe for either to cross the other's track. The fossil remains of the mastodon, which are sometimes found by the Dakotas, they confidently believe to be the bones of the Onkteri, and they are preserved by them most sacredly, and are universally esteemed for their wakan qualities, being used with wonderful effect as a sanitive medicine. The Wakinyan are the Dakota's chief war-gods, from whom they have received the spear and tomahawk, and those points which will shield them from harm when exposed to the murderous weapons of their enemies.

IV. Witte-ko-kah-gah, is the god of the grass or weeds. The proper translation of the word is, "to make crazy." This god, they say, is formed from a coarse kind of weed, called pajee-ko-tah, which has the power of giving them fits, or making them crazy, and also of giving them success in hunting. This god is represented in the figure of a man. In his right hand he holds a rattle of deers' hoofs.

There are sixty-four deer claws in this rattle, as they say, the deer claws of eight deers. In his left hand he carries a bow and arrow; and although the arrow is made blunt by chewing it, still he can send it through the largest animal. From his cap are streaks of lightning, so brilliant as to dazzle the eyes of animals, and thus enable him to approach close to them. In his mouth is a whistle, which is used in the dance to invoke the assistance of this god, which is done when the Indians have bad luck in hunting.

V. Wa-hun-de-dan, or the Aurora Borealis, or Old Woman, or Goddess of War. In going to war the Dakota chief invokes this god. The same appears to him and instructs him how to act, where he will find the enemy, their condition, the success and misfortune that will attend the war party. The goddess is represented with hoofs on her arms; and as many of these as she throws to the ground indicate the number of scalps the party will take. If the party is to have bad luck she will throw to the ground as many broken arrows as there will be warriors killed and wounded.

VI. Takuxkanxkan (Tah-koo-shkan-shkan). This god is invisible and ubiquitous. The name signifies "that which stirs." In cunning and passion, the Takuxhanxkan exceeds any of the other gods, and has a controlling influence over both intellect and instinct. He resides in the consecrated spear and tomahawk, in boulders (which are hence universally venerated by the Dakotas), and in the "Four Winds." The ceremony of the vapor bath is a sort of sacrifice to this god. He is never better pleased than when men fall in battle, or otherwise. The object of that strange ceremony of the Dakotas, in which the performer, being bound hand and foot with the greatest care, is suddenly unbound by an invisible agent, is to obtain an interview with this object of Dakota superstition, instead of the Great Spirit, as Carver supposed when he witnessed its performance, as related in his book of travels among the Indians. Subordinate to the Takuxkanxkan, are the

buzzard, raven, fox, wolf, and some other animals of similar nature.

VII. The Heyoka (Hay-o-kah). Of the Heyoka, like the Wakinyan, there are said to be four external forms; but it would be tedious to particularize. They are represented as being armed with bows and arrows, and deer-hoof rattlers, into which is infused the electric fluid; and one carries a drum, which is filled with the same. For a drumstick a Wakinyan is used, the tail serving for a handle. One of the varieties of these gods, like Takuxkanxkan, is invisible; it is the gentle whirlwind. By the virtue of their medicines and tonwan powers, they aid men in seeking the gratification of their libidinous passions, in the chase, in inflicting diseases, and in restoring health. The nature of the Heyoka is the opposite of nature, i. e., they express joy by sighs and groans, and sorrow by laughter; they shiver when warm, and pant and perspire when cold; they feel perfect assurance in danger, and are terrified when safe; falsehood, to them, is truth, and truth is falsehood; good is their evil, and evil their good. I might proceed with almost endless specification of Dakota deities, but those already mentioned will suffice for the present purpose.

In these, and divinities like these, as various as their imaginations can create, or their wants demand, the Dakotas find all that they desire. The abilities and powers of the gods combined, are the abilities and powers of the medicine-men.

CHAPTER VIII.

WHAT USE DOES THE MEDICINE-MAN MAKE OF HIS POWERS.

It would doubtless be impossible, says Gideon H. Pond, in Schoolcraft's History of the Indian Tribes, for the wakan-man to substantiate his claims with an intelligent and enlightened people, but it is not even difficult to do it

among such a people as the Dakotas. Ignorance is emphatically the mother of credulity; and no absurdity is too great to be heartily received by an ignorant savage, when proposed by one of artful cunning; and such the persons in question generally are, who combine their talents for the benefit of the craft. The blind savage finds himself in a world of mysteries, oppressed with a consciousness that he comprehends nothing. The earth on which he treads teems with life incomprehensible. It is without doubt wakan. In the springs which never cease to flow, and yet are always full, he recognizes the “breathing places” of the gods. When he raises his eyes to heaven, he is overwhelmed with mysteries; for the sun, moon, and stars are so many gods and goddesses to gaze upon him. The beast which he pursues to-day shuns him with the ability of an intelligent being, and to-morrow seems deprived of all power to escape from him. He beholds one man seized with a violent disease, and in a few hours expire in agony, while another almost imperceptibly wastes away through long years and then dies. One he sees prostrated with racking pain in an instant, and then as suddenly restored to ease and vigor, while another drops away unnotified of death’s approach, and without any cause which he can perceive. Pains which are excruciating will seize upon one part of the body at one moment — at the next, leap to another part, and then vanish. He finds himself a creature of ten thousand wants, which he knows not how to supply, and exposed to innumerable evils, which he can not avoid.

All these and thousands of other things like these, to the Indian are tangible facts; and under their influence his character is formed. As, therefore, the tinder is susceptible of ignition, so the Indian mind is ready for deception, and hails with joy one who claims to comprehend these mysteries, to be able to contribute to the supply of all these wants, and successfully to contend with all these intolerable evils; and we are prepared to expect that the wakan-man will put bridles into the mouths of their

people. To establish their claims, these men and women cunningly lay hold of all that is strange, and turn to their own advantage every mysterious occurrence. They assume great familiarity with whatever astonishes others; they foretell future events, and often with a sufficient degree of accuracy; those at one village affect to be familiar with that which is transpiring at another village leagues distant; persons who are almost reduced to skeletons by disease, in a day or two are as suddenly restored to perfect soundness, by their agency. When famine pinches the helpless infant and its disconsolate mother, and even the proud hunter sits down in the gloom of despair, relief often comes suddenly, in an unlooked for, and even improbable manner, apparently through the influence of the wakan-man; or, if their efforts are for a time unsuccessful, and the suffering is protracted, it is attributed to the sins of the people. By the mental illumination of the wakan fires, obtained by almost superhuman abstinence, watchings and efforts, they discover the movements of an enemy, wherever he may be, of which fact no doubt remains, when the little handful of warriors are led to victory by these god-men. At times, they appear to raise the storm or calm the tempest; to converse with the lightnings and the thunder, as with familiar friends; and if one of them happens to be injured or killed by the electric fluid, it only proves the truth of all he has said concerning the Wakingan, and his own disobedience to their mandates. To satisfy the cravings of the gods within them, these persons frequently, with great ceremony, publicly tear off with their teeth and eat the raw and bleeding flesh of slaughtered animals, like starving beasts and birds of prey; thus devouring parts of dogs, a fish entire, not excepting bones and scales; and they even quaff considerable quantities of human blood. By the performance of thousands of wonders such as those enumerated, these pretenders triumphantly substantiate their claims to inspiration, and are believed to be the great powers of the gods; and if some are looked upon as

impostors, this fact only serves to enhance the importance of those who, being more crafty, are successful.

As the mediator between their divinities and the Dakotas, the wakan-man bears testimony to the divinities;



AN INDIAN MEDICINE-MAN.

reveals their character and will — dictates chants and prayers — institutes dances and feasts, and sacrificial rites — defines sin and its opposite — imposes upon the people a system of superstition to suit his own caprices,

with an air of authority which may not be resisted, and with a precision which it will be difficult to exceed; a system so artful, so well adapted to the condition of the Indian, that it weaves itself into every act, and is embodied in each individual, and insures his most obsequious surrender to its demands. Sin consists in any want of conformity to, or transgression of the arbitrary rules prescribed by the wakan-man, or want of respect for his person; and holiness consists in conformity to these rules, and well-expressed respect for the wakan-man; while the reward and punishment are of such a nature that they may be appreciated by the grossest senses. In the capacity of a priest, the influence of the Dakota medicine-man is so extensive and complete, that scarce an individual can be found in the nation who is not a servile religionist.

THE WAKAN-MAN AS A WARRIOR.

Every Dakota man looks to the wakan-man as almost his only resource. From him he receives a spear and tomahawk, constructed after the model furnished from the armory of the gods, painted by inspiration, and in which resides the spirit of the gods, and also those paints which serve as an armature for his body. To obtain these things, the proud applicant is required to become a servant to the Zuya wakan, while the latter goes through those painful and exhausting performances, which are necessary preparatory to the bestowment of them; such as vapor-bath, fastings, chants, prayers, etc. The implements of destruction being thus consecrated, the person who is to receive them, wailing most piteously, approaches the war-prophet and presents the pipe to him as to a god; and while in the attitude of prayer, he lays his hand upon his sacred head; penetrated with a sense of his own impotency, he sobs out his request in substance as follows: "Pity thou one who is poor and helpless — a woman in action, and bestow on me the ability to perform manly deeds." The prophet then presents the weapon desired, saying, "Go thou, try the swing of this tomahawk and the thrust of

this spear, and witness the power of the god to whom they belong; but when in victory thou shalt return, forget not to perform thy vows." Each warrior is required to paint himself for battle in the same manner that his arms have been painted by the prophet; and may never paint in the same manner at any other time, except it may be in the performance of extraordinary religious rites. In this manner every young man is enlisted for life into the service of the war-prophet. These weapons are preserved as sacred by the Dakota warriors. They are carefully wrapped up in a cloth cover, together with plumes and sacred pigments, and are laid outside of the tent every day, except in the storm, and may never be touched by a female who has arrived at the age of puberty. Every warrior feels that his success, both in war and hunting, depends entirely upon the strictness with which he conforms to the rules and ceremonies imposed upon him by the wakan warrior. The "armor feasts" are of almost daily occurrence in the Dakota camp, when the fruits of the chase are sufficient to supply them — when these arms are always religiously exhibited. Thus the influence of the medicine-men as warriors, pervades the whole community, and it is hardly possible to overestimate it; it is, however, vastly weakened by coming in contact with civilization and Christianity, and the medicine-men themselves seem to be well aware of the fact, that the dissemination of knowledge among the people tends directly to its destruction.

The wakan-man is a doctor. In the capacity of a doctor or wapiga, the influence of the Dakota medicine-man has scarcely any limits. Health is hardly more necessary to the happiness of the Indian than the wakan-man is for the preservation of health. It is believed that they have in their bodies animals (gods), which have great powers of suction and which serve as suction-pumps, such as the lizard, bull-frog, leech, tortoise, garter-snake, etc. Other gods confer on them vocal powers, and their chants and prayers are the gifts of inspiration. The following is in-

serted here as a specimen of the chants which are used by these doctors, and is evidently from the wakinyan god, and the manner of the person using it is such as to impress all present that he is conscious that it expresses his own abilities.

Indian.

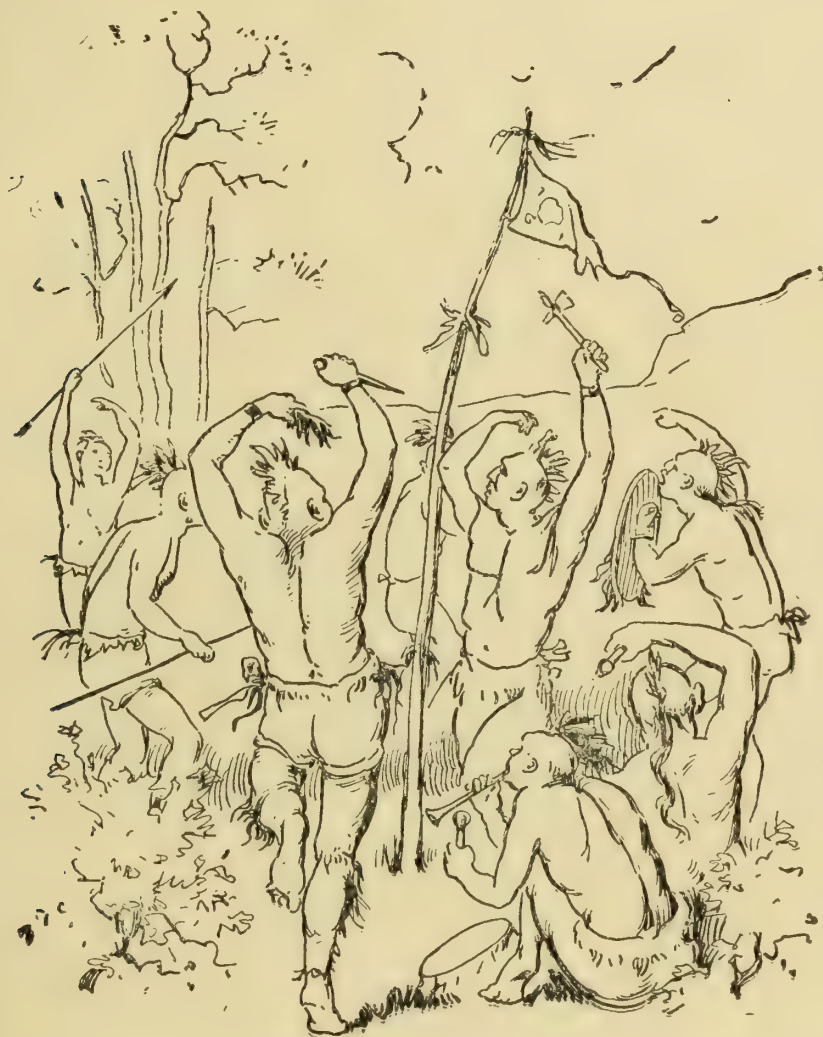
“ Marpiya mibeya wakanyan awakinye;
Maka cokaya ojanjanwaye.
Tatankadan maka nabaza wanke,
Miye wan iyarpewaye.”

Translation.

“ Flying god-like, I encircle the heavens;
I enlighten the earth to its center.
The little ox lies struggling on the earth,
I lay my arrow to the string.”

If the doctors are long without practice, they suffer great inconvenience from the restlessness of the gods within them. To pacify these, they sometimes take blood from the arm of some person and drink it. When one of them, having been respectfully and reverently called upon, and liberally prepaid, is about to operate upon a suffering patient — “a little ox struggling on the earth” — he has him placed upon a blanket on the ground, in a tent, with the body chiefly naked. He also generally strips off his own clothes, except the middle-cloth. After chants, prayers, the rattling of the gourd-shell, and innumerable other silly ceremonies, and making a variety of indescribable noises, and muttering something like the following, “the god told me that having this, I might approach even a skeleton and set it on its feet,” he gets down upon his knees, and applying his mouth to the affected part of the patient, sucks with an energy which would seem to be almost superhuman; the gourd-shell still rattling violently. In this manner the god which is in the doctor pumps the disease from the sufferer. After sucking thus for a considerable time, the doctor rises on his feet in apparent agony, groaning so as to be heard a mile if the atmosphere

is still, striking his sides, writhing and striking the earth with his feet so as almost to make it tremble, and holding a dish of water in his mouth, he proceeds with a sing-song bubbling to deposit in the dish that which has been drawn from the sick person. This laborious and disgusting operation is repeated with short intervals for hours. The



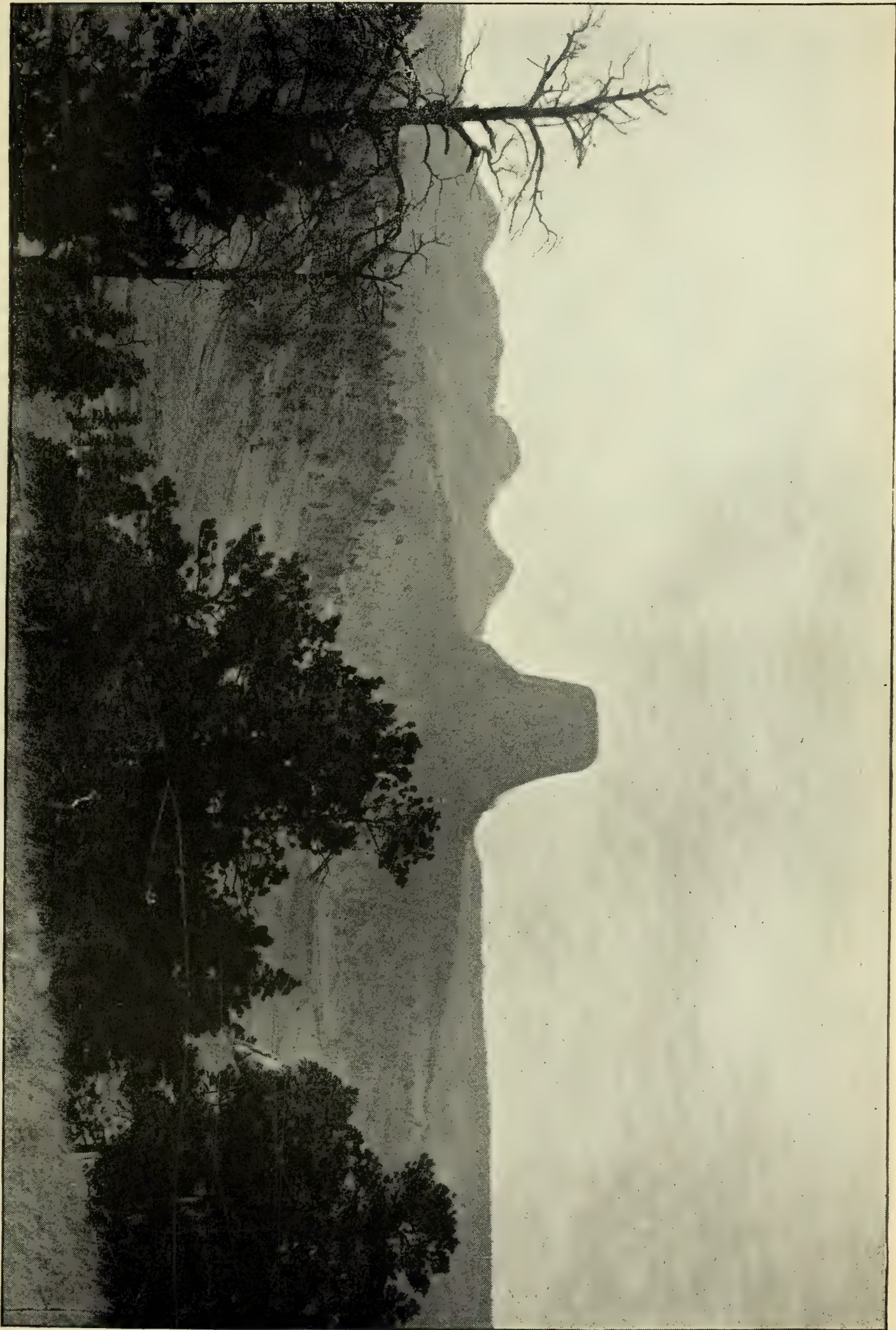
INDIAN WAR DANCE.

operant is thus enabled, not only to relieve the sufferer, but also to discover the sin on account of which he has been afflicted, the spirit of which he sees run into the lodge, and violently lay hold of the unfortunate sinner, as if he would rend him to atoms. The doctor now makes an image of the offended animal whose enraged spirit he saw, and causes it to be shot by three or four persons in quick succession, when the god that is in him, leaping out,

falls upon, not the image, but the spirit of the animal which the image represents, and kills it. Now the sick man begins to convalesce, unless other offended spirits appear to afflict him. Sometimes the doctor is overcome by these spirits and the patient dies, unless one of greater wakan powers can be obtained; for they are wakan to different degrees, corresponding to the strength of this attribute as it exists in the gods by whom they are respectively inspired.

It seems to be the general impression that there are wakan-men who are able to repel any foe to health till the superior gods order otherwise, but it is difficult to obtain their aid, for if they are not properly respected at all times, and well remunerated for their services, they let the sufferers perish without exerting their power to save them; doing their work deceitfully. It is also believed that they can inflict diseases as a punishment for sins committed against themselves, and that death is often the effect of their wakan powers. When they thus kill a person, they cut off the tip of his tongue and preserve it as a memento of the fact.

The people stand in great fear of these medicine-men and when sick will give all they possess and all they can obtain on credit, to secure their services, and will often give a horse for a single performance. They are always treated with the greatest respect, and generally furnished with the best of everything. And if there are impostors, this fact turns decidedly to the advantage of those who are believed to be true. There are from five to twenty-five of these men and women at each of the villages, and most of them have a fair reputation and considerable employment, and that notwithstanding these Indians are now receiving so much aid from persons of our own people who follow the medical profession. I do not believe that an individual Dakota can be found who does not believe that these jugglers can heal diseases without the help of vegetable or mineral medicines, except as this faith has been destroyed by the introduction among them of the sciences and Christianity; and even at this day, the persons who do not employ them as wakan jugglers are very few indeed.



DEVIL'S TOWER.

CHAPTER IX.

O-KEE-HEE-DE-PAHA (DEVIL'S TOWER).

Among the numerous natural curiosities in and around the Black Hills, Okeeheede-paha or Devil's Tower holds the first place. The same is located in the Mato Tepee or Bear Lodge district. The name of Mato Tepee has been hitherto given to this remarkable uplift. But it is clear that the name could never have been given by the Indians to the tower itself, as no bear could lodge on or in it. The above name is correct, as the Indians believed that Okeeheede, the Bad Spirit, lived in this tower. Some of them, indeed, believed that Toon-kan, or Inyan, the stone god, made it his abode; whilst others believed the stone god to reside in "Inyan Kaya" southwest of the Devil's Tower. The stone god was considered the oldest of the gods by the Dakotas. When asked why they consider him the oldest they answer that he is the hardest. It may be that they connect with endurance the idea of duration. In their worship, stone worship holds almost the first place. When the Indian is in trouble or desires to propitiate the deity his first act is to scratch the grass from a small patch of ground, make the ground smooth and take the first stone he finds. A round or oval stone of the size of a man's hand is preferable. This he paints red, puts some swan-down upon it, calls it Too-kan and then prays to the god which is supposed to dwell in or hover near it. Many are the legends about the Bad Spirit and that the Black Hills are his particular abode.

The Devil's Tower stands on the left bank of the Belle Fourche, or North Fork of the Cheyenne river, about fifty miles from Deadwood in a northeastern air line. It rises, according to careful measurement by Captain Tuttle in 1875, 1,126 feet above the river, and about 2,260 feet above the level of the sea. It is a great rectangular obelisk of trachyte, with a columnar structure, giving it a vertically

straited appearance, and it rises 625 feet, almost perpendicular from its base. Its summit is so entirely inaccessible that the energetic explorer, standing at its base, could only look upward in despair of ever planting his foot on the top. The width of the summit from north to south is 386 feet, and the width at the base is 796 feet. The rock is coarsely porphyritic sanidin trachyte of greenish color. In the mass it has a crystal-like structure on a grand scale, which from a short distance gives the column the appearance of a fascicle of gigantic fibers. From the base, which is considerably broader than the body of the peak, each fiber-like crystal or column rises in bold curve to the bottom of the vertical obelisk which it then follows to the summit.

The columns have generally a rectangular or rhombic section, but are sometimes triangular or hexagonal. With exception of an occasional fracture each column or crystal continues to the very summit. The sides are of various dimensions but average from two to four feet at the base. They diminish upward in the same ratio with the total column. Careful examination at the base shows that the columnar structure is not continuous below the portion of the peak exposed to view. The columns differ somewhat in size and position from those characteristic of basalt. The latter commonly referred to contraction in cooling occasionally combined perhaps with a concretionary action, and they are always formed perpendicular to a surface of cooling. In a dike they are perpendicular to the walls, and in an overflow to the atmospheric surface. They are rarely of any great length, and frequently they extend but part of the way through the bed, ending irregularly in a structureless mass. Here we have columns over six hundred feet in length, rising perpendicularly from a seemingly massive base. It is exceedingly difficult to account for this as a result of cooling by comparison with any known basaltic phenonema; and indeed Bear Lodge in its shape and structure appears not to have been repeated elsewhere by nature but stands alone unique and mysterious.

The time will come when the Mato Tepee will be set aside as a national park and the Devil's Tower visited by the seeker of nature's grand designs.

CHAPTER X.

MATO-PAHA (BEAR BUTTE.)

To the Indian approaching from the east and southeast this remarkable uplift presents the figure of a huge bear, hence the name. This isolated and significant Butte rises about 1,200 feet above the surrounding prairie on a point five miles northeast from Fort Meade and about eight miles from the main hills. Its elevation above the sea, from careful observations by United States officers at Fort Meade, is 4603 feet. It is an outburst of trachyte and the sedimentary formation are much altered at its base. Its southern and western, as also the northern flanks, are very abrupt and nearly inaccessible to human beings, but it can readily be ascended on its eastern buttresses. The name of Bear Butte has sometimes been given to the uplift but that is not correct. When I first visited the top of the Butte, in September, 1883, I found a number of pine trees, dwarf indeed, but quite old. Many of them had stones grown into the forks and this growth showed in two cases an age of over forty years. Red Cloud, whom I asked for an explanation about these stones, said that they were put there for various purposes. Indians ascending the Butte in years gone by would place stones in the branches and thus "make their homestead claim;" another band would come and "jump the claim" by putting new stones above those there already. Some stones were put there to worship, and others as sacrifices for the dead. What might be called "between the shoulders" of the Butte served evidently as a watch tower and a signal station. Numerous places shows that fires were kept burning there for a long

time. I was also told that a number of Indian chiefs found here their resting place. Bear Butte played an important part in Indian folk lore as seen on former pages. The Mandans are said to have made annual pilgrimages to the place as long as they were allowed to do so. One of their religious festivals is called "Mee-nee-ro-ka-ha-sha," which means "sinking down or settling of the waters."

Nu-mahk-muck-a-nah was the only man saved from a big flood; he landed his big canoe on a high mountain in the



BEAR BUTTE, S. D.

West, and every year the Mandans must make some sacrifices of edged tools to the water and visit the high mountain, for if this be not done there will be another big flood and no one will be saved, as it was with such tools that the big canoe was made with. The time for the annual pilgrimage and sacrifice was at the full expanse of the willow leaf in spring.

According to their tradition a bird let out from the canoe returned and brought a willow bough. This bird was the mourning or turtle dove; hence it is considered a medicine bird and to kill it is a crime.

CHAPTER XI.

THE INDIANS.

By nature they are decent and modest, unassuming and inoffensive, and all history proves them to have been found friendly and hospitable on the first approach of the white people to their villages in all parts of the American continent. Columbus wrote back to Ferdinand and Isabella on coming in contact with the aborigines for the first time : “I swear to your majesties that there is not a better people in the world than these; more affectionate, affable, or mild. They love their neighbors as themselves, and they always speak smilingly.” The Sioux were celebrated for their hospitality and goodness toward strangers, and more particularly toward the whites. Anything that a white man would ask them was granted, if it were possible to do so. They knew nothing about intrigue, and supposed that every person who came to their country was a friend.

Father Hennepin, who was the first white man who ever visited the upper parts of the Mississippi, speaks of the Sioux as patterns to the civilized part of creation. Indeed, he speaks of them in raptures, as if they were really his own ancestors. Everything good that a man could say of another set of men Father Hennepin said of the Sioux. But how different are they to-day? How this alteration has taken place, or what occasioned it, can be attributed only to their great intercourse with those whom we call civilized people. To-day you can not see much of the genuine Indian in them. You see nothing of the Indian independence, nor of their enterprising character as hunters or warriors, nor do you see the robust, stout, able-bodied people that they were before the pale-face came in contact with them.

Hear what the chivalrous and heroic General Custer, an authority among military men, has to say of his estimate of the Indian character. He knew the Indian well in

peace and war. He had made them the object of an intelligent and closely and keenly observant study. He was one of the most conspicuous victims of Indian warfare. Though the General is classed as among the most effective "Indian fighters," and came to his early death at their hands in a fearful massacre, he was a man of humane and kindly heart. In his "Life on the Plains," referring to the romantic, gentle, and winning view which Cooper and other romancers have given of the Indian, as so misleading and wholly fanciful, he says: "The Indian, when we were compelled to meet with him, in his native village, on the war-path, and when raiding upon our frontier settlements and lines and travel, forfeits his claim to the noble red man. We see him as he is, and so far as all knowledge goes, as he ever has been,—a savage in every sense of the word; no worse, perhaps, than his white brother would be similarly born and bred, but one whose cruel and ferocious nature far exceeds that of any wild beast of the forest or desert. That this is true, no one who has been brought into intimate contact with the wild tribes will deny.

"Perhaps there are some who, as members of peace-commissions, or as wandering agents of some benevolent society, may have visited those tribes, or attended with them at councils held for some pacific purpose, and who by passing through the villages of the Indian while at peace may imagine their opportunities for judging of the Indian nature all that could be desired; but the Indian, while he can seldom be accused of indulging in a great variety of wardrobe, can be said to have a character capable of adapting itself to almost every occasion. He has one character—perhaps his most serviceable one—which he preserves carefully, and only airs it when making his appeal to the Government or its agents, for arms, amunitions, and license to employ them. This character is invariably paraded, and often with telling effect, when the motive is a peaceful one. Prominent chiefs invited to visit Washington invariably don this character, and in their "talks"

with the “ Great Father ” and other less prominent personages they successfully contrive to exhibit but this one phase.

“ Seeing them under these or similiar circumstances only, it is not surprising that by many the Indian is looked upon as a simple-minded ‘ son of nature ’ desiring nothing beyond the privilege of roaming and hunting over the vast unsettled wilds of the West, inheriting and asserting but few native rights, and never trespassing upon the right of others.



AN INDIAN HOME.

“ This view is equally erroneous with that which regards the Indian as a creature possessing the human form, but divested of all other attributes of humanity, and whose traits of character, habits, mode of life, disposition and savage customs disqualify him from the exercise of all right and privileges, even those pertaining to life itself.

“ Taking him as we find him, at peace or at war, at home or abroad, waiving all prejudices and laying aside all partiality, we will discover in the Indian a subject for thoughtful study and investigation. In him we will find

the representative of a race whose origin is, and promises to be, a subject forever wrapped in mystery; a race incapable of being judged by the rules or laws applicable to any other known race of men; one between which and civilization there seems to have existed from time immemorial a determined and unceasing warfare, a hostility so deep-seated and inbred with the Indian character, that in the exceptional instances where the modes and habits of civilization have been reluctantly adopted, it has been at the sacrifice of power and influence as a tribe, and the more serious loss of health, vigor and courage as individuals.

“Inseparable from the Indian character, wherever he is to be met with, is his remarkable taciturnity, his deep dissimulation, the perseverance with which he follows his plans of revenge or conquest, his concealment and apparent lack of curiosity, his stoical courage when in the power of his enemy, his cunning, his caution, and last, but not least, the wonderful power and subtlety of his senses. In studying the Indian character, while shocked and disgusted by many of his traits and customs, I find much to be admired, and still more of deep unvarying interest. To me, Indian life, with its attendant ceremonies, mysteries and forms, is a book of unceasing interest. Grant that some of its pages are frightful, and if possible to be avoided; yet the attraction is none the weaker. Study him, fight him, civilize him if you can, he remains still the object of your curiosity, a type of men peculiar and undefined, subjecting himself to no known law of civilization, contending determinedly against all efforts to win him from his chosen mode of life. He stands in the group of nations solitary and reserved, seeking alliance with none, mistrusting and opposing the advances of all. Civilization may and should do much for him, but it can never civilize him. A few instances to the contrary may be quoted, but these are susceptible of explanation. No tribe enjoying its accustomed freedom has ever been induced to adopt a civilized mode of life, or as they express it, to

follow the white man's road. At various times certain tribes have forsaken the pleasures of the chase and the excitement of the warpath for the more quiet life to be found on the reservations. Was this course adopted voluntarily and from preference? Was it because the Indian chose the ways of his white brother, rather than those in which he had been born and bred? In no single instance has this been true."

Custer proceeds to argue that a few tribes, wasted and exhausted by wars with other tribes and the whites, and by contact with civilization and disease, and unable to cope with more powerful tribes, which are always overbearing and domineering, must either become the vassals and tributaries of their enemies, or reluctantly accept the alternative of a sham conformity with the whites. He says:

"The tribe must give up its accustomed haunts, its wild mode of life, and nestle down under the protecting arm of its former enemy, the white man, and try, however feebly, to adopt his manners of life. In making this change the Indian has to sacrifice all that is dear to his heart; he abandons the only mode of life in which he can be a warrior and win triumphs and honors worthy to be sought after; and in taking up the pursuits of the white man he does that which he has always been taught from his earliest infancy to regard as degrading to his manhood, to labor, to work for his daily bread; an avocation suitable only for squaws.

"To those who advocate the application of the laws of civilization to the Indian, it might be a profitable study to investigate the effect which such application produces upon the strength of the tribe as expressed in numbers. Looking at him as the fearless hunter, the matchless horseman and warrior of the plains, where nature placed him, and contrasting him with the reservation Indian, who is supposed to be revelling in the delightful comforts and luxuries of an enlightened condition, but who in reality is grovelling in beggary, bereft of many of his qualities which in his wild state tended to render him noble, and heir to a

combination of vices partly his own, partly bequeathed to him from the pale-face, one is forced, even against desire, to conclude that there is an unending antagonism between the Indian nature and that with which his well-meaning white brother would endow him. Nature intended him for a savage state; every instinct, every impulse of his soul inclines him to it. The white race might fall into a barbarous state, and afterwards, subjected to the influence of civilization, be reclaimed and prosper. Not so the Indian. He cannot be himself and be civilized; he fades away and dies. Cultivation such as the white man would give him deprives him of his identity. Education, strange as it may appear, seems to weaken rather than strengthen his intellect." In confirmation of this last statement, Custer affirms that the gift of forest eloquence is lost under civilization. He asks:—

"Where do we find any specimens of educated Indian eloquence comparing with that of such native, untutored orators as Tecumseh, Osceola, Red Jacket and Logan, or Red Cloud or Santanta?"

"My firm conviction, based upon an intimate and thorough analysis of the habits, traits of character, and natural instinct of the Indian, and strengthened and supported by the almost unanimous opinion of all persons who have made the Indian problem a study, and have studied it, not from a distance, but in immediate contact with all the facts bearing thereupon, is that the Indian can not be elevated to that great level where he can be induced to adopt any policy or mode of life varying from those to which he has ever been accustomed by any method of teaching, argument, reasoning, or coaxing which is not preceded and followed closely in reserve by a superior physical force. In other words, the Indian is capable of recognizing no controlling influence but that of stern arbitrary power.

"And yet there are those who argue that the Indian with all his lack of moral privileges is so superior to the white race as to be capable of being controlled in his savage traits and customs, and induced to lead a proper life,

simply by being politely requested to do so.” (George Ellis “The Red Man and the White Man in N. A., p. 104.”)

CHAPTER XII.

THE INDIAN (CONTINUED.)

A large part of the life of a savage was spent in solitude, and except when he knows himself to be exposed to risks from lurking foes he is never lonely, timid or suspicious. He relies on his own resources of strength, patience and security. He could find a sufficient couch on the mossy grass, on a heap of green boughs, or in a burrow under the snow. If he did not acquire the instinct of a beast for scenting water at a distance, he was a skillful observer of all the signs which would aid him to find it. The inclination of the tops of the trees, showing the direction of the prevailing winds, and the thickening of the bark on the north side of them served him for a compass even in the depths of the forest and under a clouded and starless sky. No length of distance or obstacle in a day's tramping oppressed him with a fatigue that did not yield to a night's repose. However dampened or soaked with protracted rains, or with wintry snow might be the trees and foliage on his route, he could always gather some fungi, or dry and decayed wood, for lighting a fire. He could mentally divide the space of a journey of hundred of miles into equal parts, without the help of any signpost, and could reach his destination or return to his starting point, as he had proposed to do, at the rise or set of the sun.

In all this he conformed and adapted himself to the ways and the methods of nature. The trail through the deep forest were common to him and the beast. The deer and the buffalo made his turnpikes.

The Indians took for granted that the earth on which

they were born was bound to afford them full sustenance, as it did the animals, without any labor of their own; except such effort as they spent, like white men in pastime, hunting and fishing. Every exertion that had the look of exacting toil was to them unwelcome, menial, and degrading; they assigned all such work to their squaws, who were their beasts of burden, who put together the materials of their lodges, fetched wood and water, cooked the food, carried their papooses and household goods on their shoulders, and flayed the beasts after the hunt and cured their skins. The white man as a warrior always had the respect of the savage, but drew only his wonder or contempt when seen in any industrious occupation.

Trusting thus to the fostering care of nature, the Indians were content with its furnished resources or supplies, whether for the moment these were full or scant. They would gorge themselves to repletion, like the beasts, when they had an abundance, and would endure with marvellous fortitude the sharp pangs of hunger to the verge of starvation. Doubtless it is to this earthward kinship and compliance with nature in the savage that we are to ascribe his utter unconsciousness of and indifference to what we call offensive or revolting to the senses, — foul odors, uncleanness, filth, vermin, parasites, etc. Regarding himself as akin to the elements, the soil, and the creatures around him, the savage did not recognize what we call dirt.

Dirt has been defined as valuable matter out of place. But the savage did not regard dirt as ever out of place — whether on his person, his apparel, in his foul lodge, or in his scant utensils and in his food. Consequently to him there was no such thing as dirt. He would eat with gusto frogs, toads, snakes, and decomposing animal remains just as he took them from the ground; and his first delicious repast from the game which he killed — large or small, beast, fish or fowl — was from its raw, quivering entrails and its warm blood. The ordinary functions and processes of his organism were exactly like those which he recognized in animals; obedience to their impulses and necessities was as

unrestrained as was the use of his lungs and the voice in breathing and speaking. The relief of nature was as seemly a process as was that of satisfying it: privacy was not prompted in either case. The crowded wigwam did not admit of diffidence, modesty, or concealment in exercis-



SITTING BULL'S SON — BUFFALO-MAN.

ing the functions of nature. Anything like fastidiousness, delicacy, or squeamishness, was not only foreign to the savage, but was utterly inexplicable to him when exhibited by the white man.

The first implements which the savages were most eager to obtain from the whites were hatchets and metal

kettles. The latter were at once substituted for the vessels of unglazed pottery, or closely woven wicker, or hallowed wooden receptacles, which had previously been in use. Though much of the food of the natives was prepared by being laid upon the coals or roasted on a stake, the larger part of it required to be stewed in heated water. As their own vessels, though often called caldrons, would not bear exposure to the fire or dry heat, an ingenuous alternative was resorted to. The clay or wooden vessel was filled with water, into which there were thrown stones brought to a glowing heat in a clear fire close at hand. The process was repeated, if necessary, as the stones were removed and renewed. Into this water were cast the materials of a repast. They were often most incongruous ; for the Indians delighted in a mess, a pot-pourri, though no skill or regard was spend upon selection or adaptation to the palate.

In a banquet prepared by savage allies of the English after a bloody and protracted conflict with the French and their red allies, some of the English soldiers, though well nigh famished, lost their craving at the sight of a Frenchman's hand floating in the stew. The conglomeration of heterogeneous articles of food in the Indian's kettle was simply another act of conformity with nature ; as not what they ate, but the eating enough of any thing, was their chief object, and it was the stomach, not the palate, which they had to satisfy. At their great feasts, with a profusion of viands which might have served the Indians for successive distinct courses, the same method for cooking in caldrons all manner of fish, flesh, fowl, dogs, deer meat, buffalo, skunks, raccoons, etc., with maize, and various roots, pumpkins, squashes, beans and peas, was the approved style of festivity, with variations more from necessity than of preference. Generally the family had but one meal in common through the day. But each member of it was at liberty to eat when and as often and as much as he pleased, if there was anything left in the larder. Often a hungry sleeper would rise at night to satisfy his craving. The chance stroller or guest was always made welcome to

what the lodge contained, and was first served. When the ears of Indian corn were in the milk they afforded a rich repast, either as eaten from the stalk or roasted before an extemporized fire.

As the natives did not use salt, either at their meals or in preserving meats or fish, they availed themselves of the sun's heat, the air, and fire, to dry any surplus of such food gathered when it was abundant among them. Some of the abounding salts of the prairie have impurities which impair their preservative qualities. Often, however, as the natives were generally improvident, or, still in conformity with nature, trusted that each day would provide for itself as to "what they should eat," they were reduced to extreme need. They bore the pangs of hunger with stiff, uncomplaining patience and philosophy, passing many nights and days without sustenance. In their utmost straits they would eat roots, bark, buds, and the skins of their own mantles and moccasins. In the western valleys nature produced in luxuriant abundance a large variety of succulent and edible roots, and expanses of wild rice. As a last resort, reliance might be placed upon the somewhat stingy nutrition found in what is known as tripe de roche, a sort of mossy mushroom which covers some of the damp rocks. When this was cooked with scraps of any kind of meat, or marrow bones, it was quite satisfying. Their own dogs, and in times of famine their ponies, are necessary parts of the banquet of the Indians.

In the matter of apparel, the Indians put themselves into the same harmony with the promptings of nature. He wore clothing, not as a covering or concealment, but for convenience, comfort, and necessity under the weather. He felt most at his ease when wholly free from it; nor was it from the want of abundant materials needing but slight help from hand labor. The hide of the buffalo, and the skins of the deer, the beaver, and the smaller animals furnished him with loose or with close-fitting mantles. His feet and legs needed protection while he was tramping over rocks or through the bushes with their prongs and

briers. Not till reaching years of maturity were the children of either sex subjected to the incumbrance of clothing; and, in general, the breechcloth for men and a half skirt for women served for all except state occasions.

The more elaborate garments now seen among the aborigines owe more or less of their skill and ornaments to materials obtained from the whites, such as needles, beads, cords, silks and bits of metal; though the Indian was by no means stinted in his own resources for a gala day. His well dressed robes, soft and pliable, cured and tanned with or without the fur, wrought with porcupine quills and the feathers of birds, and his necklaces of bear claws, the plumage of the eagle, and other devices, set him off in good forest guise. For extra adornment, or to add to his fierceness in some of his games, festival, war, or scalp dances, he would add to his array, besides paint, the horns or the skins of the heads of the bison, the bear, the deer or the owl.

The colors at present used by the Indians and obtained from the whites, consist principally of the following compounds: vermillion, red lead, chromate of lead (yellow), Russian blue, chrome green, ivory black and lamp black, Chinese white and oxide of zinc. All these are in the form of pomade, or in a crude mass, and subsequently prepared for use as required.

The moccasin was prepared thus: The dressed or tanned hide of the deer furnished its upper and lower leather; a small bone of a fish, or one near the ankle-joint of the deer, provided the needle, and the sinews, the thread for sewing. The seam was behind the heel and over the foot, instead, as in our fabrics, at the sole or bottom. The moccasin was made of one piece of skin. Unlike our heavy boots, it did not impede the perspiration of the foot, and it saved the Indian from corns and bunions. The wearer was not apt to take cold, by a leak in the shoe or boot. It was easily tried and easily mended. It was equally adapted by its smoothness for treading upon the tender bottom of a canoe, and, by its pliancy and elasticity,

for coursing forest paths or climbing rocks. The snowshoe, as the winter supplement to or accompaniment of the moccasin, enabled the Indian to go upon the warpath or to chase down the beleagured game when the earth was covered with its fleecy mantle piled in mounts and drifts.

This simple device exercised the wilderness skill of its inventor, and practically tested his apt intelligence to apply materials, proportions, and disposals of parts and measurements in ways which science can not mend. It resembled in shape a miniature skiff, two feet or more in length and more than a foot in breadth, pointed at the toe, and running back with elliptical sides to a square in the rear. The frame was slight but strong, of some well-seasoned wood, like the handles of a large basket. A network of sinewy thongs was united with the frame, for bearing on the snow without heavy pressure and releasing the snow as the foot was lifted. It was confined to the foot behind by a cord tied over the instep, so that the heel could readily act freely in rising and resting. A small hoop near the point of the shoe received the toes, and retained the shoe on the foot.

Of course the whole pressure of the weight of the body came upon the front of the foot and over the line of junction of the toes. The more rapidly the wearer would walk or run, the easier was it for him to bear his light burden, and the less did he sink into the drift. When the snow-surface was glazed by ice, the simple moccasin was preferable as a covering, and the snow shoes were carried upon the back. Only practice could give facility and comfort in the use of this native invention for travel, without which a struggling wanderer would often sink to his neck at every attempt to step forward. The Indian would go like a deer when thus shod.

CHAPTER XIV.

DAKOTA HOMES.

The villages of the Dakota's were the nearest approach to the Huron town of which Brebeuf says: "They covered a space of from one to ten acres, the dwellings clustered together with little or no pretension to order. In general, these singular structures were about thirty or thirty-five feet in length, breadth and height; but many were much larger, and a few were of prodigious length. In some of the villages there were dwellings two hundred and forty feet long, through in breadth and height, they did not much exceed the others. In shape they were much like an arbor over-arching a garden walk. Their frame was of tall and strong sapplings, planted in a double row to form the two sides of the house, bent till they met, and lashed together at the top. To these other poles were bound transversely and the whole was covered with large sheets of bark from the oak, elm, spruce or white cedar, overlapping like shingles of a roof, upon which for their better security, split poles were made fast with cords of linden bark. At the crown of the arch, along the entire length of the house, an opening a foot wide was left for the admission of light and the escape of smoke. At each end was a close porch of similar construction; and here were stowed casks of bark, filled with smoked fish, Indian corn and other stores not liable to injury from frost.

"Within on both sides, were wide scaffolds four feet from the floor, and extending the entire length of the house, like the seats of a colossal omnibus. These were formed of thick sheets of bark, supported by transverse poles, and covered with mats and skins. Here in summer was the sleeping place of the inmates, and the place beneath served for storage. The fires were on the ground, in a line down the middle of the house. Each fire was sufficient for two families, who in winter slept closely packed around them. Above, just under the vaulted roof,

were a great number of poles, like the perches of a hen-roost, and here were suspended weapons, clothing, skins and ornaments. Here too in harvest time, the squaws hung the ears of unshelled corn, till the rude abode, through all its length, seemed decked with a golden tapestry. In general, however, its only lining was a thick coat of soot



ON THE MOVE.

from the smokes of fire with neither draught, chimney nor window. So pungent was the smoke that it produced inflammation of the eyes, attended in old age with frequent blindness.

“ Another annoyance was the fleas, and a third, the unbridled children. Privacy there was none. The house was one chamber, sometimes lodging more than twenty

families. He who entered at a winter night beheld a strange spectacle, the vista of fires lighting the smoky concave; the bronzed groups encircling each — cooking, eating, gambling, or amusing themselves with idle badinage; shrivelled squaws, hideous with three-score years of hardship; grizly old warriors, scared with the enemies war clubs; young aspirants whose honors were yet to be won; damsels gay with ochre and wampun; restless children pell-mell with restless dogs. Now a tongue of resinous flame painted each wild feature in vivid lights, now the fitful gleam expired and the groups vanished from sight, as they vanished from the country they once inhabited.”

Such is their wigwam. The tepee or lodge is built in the same manner but smaller, to afford room to but one family; often it has a circular form, and instead of bark or earth is covered with skins. These skins, after being dressed, are sewed together and made into the form of a tent, supported within by some twenty or thirty poles of twenty-five feet in length with an apex or apperture at the top, through which the smoke escapes and the light is admitted. These lodges or tents can be taken down in a few minutes by the squaws when they wish to change their location, and easily transported to any part of the country where they wish to encamp. In by-gone times they often moved five or six times during the summer, following the game. Sometimes from five to six hundred of these lodges would be built together forming a regular village. When the hour was determined upon for moving and the necessary preparations made, the signal would be given by the chief. His lodge would be seen flapping in the wind, a part of the poles having been taken out from under it. Now the moving begins. The poles of each lodge are divided into two bunches, and the little end of each bunch fastened upon the shoulders or withers of a horse, leaving the butt end to drag behind on the ground on either side. Just behind the horse a brace or pole is tied across, which keeps the poles in their respective places. Upon the brace and the poles behind the horse is

placed the lodge or tent, which is rolled up, and also numerous other articles of household goods such as an Indian has. On the top of this baggage the old women and children are placed. Each horse has its own conductress, who sometimes walks before and leads it, with a tremendous pack on her own back, and at others she sits astride of its back with a child, perhaps at her breast, and another astride the horse at her back, clinging to her waist with one arm, while it affectionately embraces a sneaking dog-pup in the other. In this way five or six hundred tepees with all their furniture, may be seen drawn out for miles, creeping over the grass-covered plains of the country, and three times that number of men on good horses, strolling along in front or on the flank; to this may be added five times that number of dogs, which fall into rank, and follow the train and company of the women, and every cur of them which is large enough and not too cunning to be enslaved, is encumbered with a car or sled (or whatever it may be better called) on which it patiently drags its load, a part of the household goods and furniture of the lodge to which it belongs. Two poles about fifteen feet long, are placed upon the dog's shoulder, in the same manner as the lodge poles are attached to the horses, leaving the larger ends to drag upon the ground behind it; on which is placed a bundle or wallet which is allotted to the animal to carry, and with which it trots off amidst the throng of dogs and squaws, faithfully and cheerfully dragging its load till night, and by the way loitering and occasionally

“ Catching at little bits of fun and glee

That's played on dogs enslaved by dogs that's free.”

CHAPTER XV.

THE BUFFALO.

The Indians universally believe that the buffalo were made by the Creator especially for their use, and certainly when buffaloes were plentiful they could get along quite comfortable with very little else. When one considers the use made by them of the buffalo, both at the present day and prior to the advent of the whites, one is not surprised at the claim and belief. Of the skin they make robes, lodges, lariats, ropes, trunks or par-fleche sacks, saddles, saddle-covers, shields, frames for war-bonnets, gloves, moccasins, leggins, shirts, hats, gun-covers, whips, quivers, knife-scabbards, cradles, saddle-bags, saddle-blankets, decorations for saddles, beds, bridles, boots and a kind of sled for hauling the meat over the snow. From the thick part of the skin of the neck a glue is made by boiling and skimming. Ropes and lariats are made from the scalp-lock, or long tuft on the forehead, and pillows from their hair. From the horns are made spoons, cups, dishes, powder-horns, arrow-heads, and bows by splitting the longer horns, and the tips are fastened to tender poles which are used in certain games.

From the fascia (thin tendinous covering which supports the muscles, and by the interpreters called sinew) found under the shoulder-plates, the abdominal fascia, the two strips on each side over the hump, and the strip on each side of the back, they make thread, bowstrings, ropes for softening robes by rubbing, fasten feather-guides to arrows, and stiffen and making bows more elastic by placing on back. From the thick ligament of the upper portion of nape of neck is made a pipe. An instrument used to straighten arrows is fashioned from the centre bone of the hump by cutting a hole in it, and from some of the smaller bones arrow-heads are made, and an instrument for "flushing" or scraping the meat from hides. From

the shoulder-blades they make axes, knives, arrow-pointed instruments for dressing robes and smoothing down porcupine work. The trachea is used as a sack for paints, etc. The rough papillae of the tongue is used for hair brushes. The brain, liver and fat are utilized for tanning skins. Instruments for shaping bows and small dog sleds are constructed from the ribs. From the paunch they prepare water-pipes or sacks, in which meat and blood are sometimes cooked by boiling with heated stones, the latter being dropped into the sacks.

From the thigh bones, traps are made similar to our dead-falls. From the tail they make knives, scabbards, handles to war clubs, and medicine rattles. The udder dried became stiff and hard and is used for dishes, tobacco bags, medicine-rattles, etc. The pericardium is shaped for sacks. The gall is sometimes used as a drink, and produces intoxication; there is occasionally found in the gall a hard yellow substance, and this is highly valued as a paint for the face.

The anniotic fluid, in which the foetus floats, is used by them to quench thirst when water cannot be obtained, and is also generally used to cook or boil the foetus in, the latter being especially prized as a dainty and delicate morsel of food. The marrow is eaten both raw and cooked, being roasted in the larger bones by laying them on the coals. The teeth are used for necklaces and are also put in medicine-rattles.

They consider the contents of the paunch an excellent remedy for diseases, and in case of frost-bite, if the afflicted member is thrust into the pouch of a freshly killed buffalo, relief obtains without evil after-effects. A very little buffalo fat is sometimes mixed with the tobacco or red-willow bark for smoking. The liver is often eaten raw and while still warm with animal heat, the gall-juice being sprinkled over it as a sauce. The kidneys are eaten both raw and cooked. The meat, fat, and most of the intestines are staple articles of food, and are kept for months by being simply dried in the sun; the hump is considered particularly fine for drying. The contents of the paunch

furnish food for the ponies, and the liquid in the same, cleared by the gall, prized for drinking, is cool and tasteless; *i. e.*, devoid of any unpleasant taste.

The "buffalo chips" are used for fuel, and before the days of flint and steel and matches, were particularly good for making a fire by the friction of wood. These "chips" pounded fine and kept dry, are used to keep the small children warm, they being partially buried in the powdered material. The value of these chips can scarcely be appreciated by those who have not suffered for the want of fuel on our treeless prairies. The tanned buffalo skin without the hair furnishes the best material for tepees.

There are many stories told in regard to the buffalo, and prominent among them, from its wide circulation in the North and the general confidence in it, is that of a buffalo cow killed near Slim Buttes, north of the Black Hills, some twenty-five years ago. On cutting her open to take out the foetus, an old woman, wrinkled and gray, was found. All the bands of the Sioux, and some of adjacent tribes, were called to the spot to see the phenomenon.

Among some of the tribes the first buffalo killed by a young man was the occasion for special religious ceremony and feast. Mr. Dunbar describes this among the Pawnees:—

"The entire animal was carried to the lodge of some prominent person, who thus became master of the feast. He invited in a dozen or more old men to feast with him and assist in the observance of the occasion, and other special guests; they began at sunset; the meat was cut in small pieces and set over the fire to boil, except the heart and tongue, which were carried without the lodge and burned as a sacrifice. While the meat was boiling and the sacrifice burning, the medicine-bundle was taken from its place, opened, its contents inspected and placed out in due order, various ceremonies were performed over them, puffing smoke over them, stroking them with the hand, talking or praying to them, etc., by members of the company; speeches were then made by certain of the old men, the burden of whose remarks was laudation of the slayer of the buffalo, the master

of the feast, etc., and finally a prayer was offered. The meat having thoroughly cooked meanwhile, was apportioned among all present, each of whom had opportunity to gorge himself to the utmost. After the eating, the sacred things were gathered together, replaced in the bundle, and suspended again in its place."

Marquette, descending the Mississippi in 1673, saw these animals, and in his journal says:—

"We call them wild cattle, because they are like our domestic cattle; they are not longer, but almost as big again, and more corpulent; our men having killed one, three of us had considerable trouble in moving it. The head is very large, the forehead flat, and a foot and a half broad between the horns, which are exactly like our cattle except that they are black and much larger. Under the neck there is a kind of large crop hanging down and on the back a pretty high hump. The whole head, the neck and part of the shoulders, are covered with a great main like a horse's; it is at least a foot long, which renders them hideous, and falling over their eyes, prevents their seeing before them. The rest of the body is covered with a coarse, curly hair like the wool of our sheep, but much stronger and thicker. It falls in summer and the skin is then as soft as velvet. At this time the Indians employ the skin to make beautiful robes, which they paint with various colors."

Father De Smet, in a letter dated Cincinnati, St. Xavier College, August 3d, 1854, and addressed to the editor of the *Précis Historiques*, Brussels, Belgium, gives an interesting account of the buffalo hunt and says:—

"To be a good hunter and a good warrior are the two qualities *par excellence* that constitute a great man among all the nomadic tribes of North America. The chase absorbs the whole attention of the savage. The knowledge that he has acquired, by long experience, of the nature and instincts of animals, is truly marvelous. He is occupied with it from his tender infancy. As soon as a child is capable of managing a little bow, it is the first

instrument his father puts into his hands, to teach him to hunt little birds and animals. The young Indians are initiated in all their stratagems. They are taught with as much care how to approach and kill the animal, as in civilized society a youth is instructed in reading, writing and arithmetic.

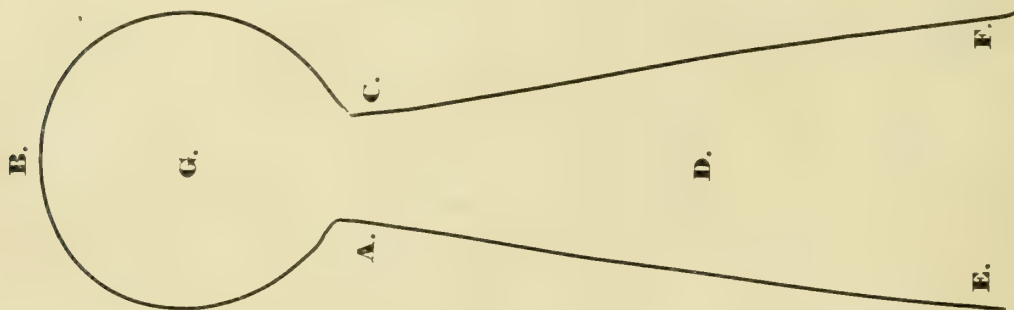
“An expert hunter is acquainted minutely with the habits and instincts of all the quadrupeds which form the object of the chase. He knows their favorite haunts. It is essential for him to know what kind of food an animal first seeks, and the most favorable moment of quitting his lair for nourishment. The hunter must be familiar with all the precautions that are necessary to elude the attentive and watchful instincts of his intended victims; he must appreciate the footstep that has passed him, the time that has elapsed since it passed and the direction it has pursued. The atmosphere, the winds, the rain, snow, ice, forest and the water are the books which the Indian reads, consults and examines on leaving his tent in pursuit of game. The tribes of the desert find their subsistence in the chase; the flesh of animals affords them food, and the skins clothing.

“Before the arrival of the whites, the method of killing the different species of animals was very simple, consisting ordinarily of stratagems and snares. They still have recourse to the primitive method in the hunt for large animals, when they have no horses capable of pursuing them, and powder and ball for killing them are wanting. The trap prepared for the bison (buffalo) is an inclosure or pen, and is one of the more early ways, and perhaps the most remarkable in its execution; it demands skill, and gives a high idea of the sagacity, activity and boldness of the Indian. As on all other occasions of moment the medicine-men are consulted, and the hunt is preceded by a great variety of superstitious practices. I witnessed one of these hunts at the base of the Rocky Mountains, and of this I will endeavor to give a faithful detail. The bison roams the prairie in herds of several hundreds, and often of several thousands. On many of my travels I have seen

with my own eyes, as far as I could discern on these immense plains, thousands and thousands of these noble animals moving slowly, like an interminable troop, in one direction, and browsing the grass as they progress. They have a fearful appearance; their hairy heads inspire with terror those who are ignorant of the pacific habits of this noble quadruped. Indeed, such is their timidity that one man can put to flight the most numerous herd. When alarmed, the tramp of their hoofs, their bellowings, and the columns of dust which they raise, resemble the deep murmur of a deep tempest mingled with peals of thunder, lessening as they grow more remote. The flesh of the bison is much esteemed and very nourishing; it is deemed the daily bread of all the Indian tribes on the great plains.

“ A tribe that has few guns, few horses to run down the animals, which needs provisions, and skins for clothing, must employ the old or primitive method of hunting which has existed from time immemorial. The Indians whom I saw engaged in it were encamped on a suitable place for the construction of a park or inclosure. The camp of which I speak contained about three hundred lodges, which represents 2,000 or 3,000 souls. They had selected the base of a chain of hills, whose gentle slope presented a narrow valley and a prairie, in which all the lodges were ranged. Opposite the hills there was a fine large prairie. After the construction of the lodges, a great council is held, at which all the chiefs and all the hunters assist. They first choose a band of warriors to hinder the hunters from leaving the camp, either alone or in detached companies, lest the bison be disturbed, and thus be driven away from the encampment. The law against this is extremely severe; not only all the Indians of the camp must conform to it, but it reaches to all travelers, even when they are ignorant of the encampment or do not know that there is a hunt in contemplation. Should they frighten the animals, they are also punishable; however, those of the camp are more rigorously chastised in case they transgress the regulation. Their guns, their bows

and arrows, are broken, their lodges cut in pieces, their dogs killed, all their provisions and all their hides are taken from them. If they are bold enough to resist the penalty, they are beaten with bows, sticks and clubs, and this torment frequently terminates in the death of the unhappy aggressor. Any one who should set fire to the prairie by accident or imprudence, or in any way frighten off the herd, would be sure to be well beaten. As soon as the law is promulgated, the construction of the pen begins. Everybody labors at it with cheerful ardor, for it is an affair of common interest, on which the subsistence of the entire tribe during several months will depend. The pen has an area of about an acre. To inclose it in a circular form, stakes are firmly fixed in the ground, and the distance between them filled with logs, dry boughs, masses of stone, in short, with whatever they can find that will answer the purpose. The circular palisade has but one opening; before this opening is a slope embracing fifteen or twenty feet between the hills; this inclined plane grows wider as it diverges from the circle; at its two sides they continue the fence to a long distance on the plain.



PLAN OF THE PEN. — A, B, C, Pen; A, C, Opening; D, Slope; A, G, and C, F, Hills and Fences; G, Medicine-mast.

“As soon as these preparations are completed, the Indians elect a grand master of ceremonies and of the pen. He is generally an old man, a distinguished personage, belonging to Wah-kon, or medicine band, and famous in the art of jugglery, which the Indians deem a supernatural science. His office is to decide the moment for driving the bisons

into the inclosure, and give the signal for the commencement of the hunt. He plants the medicine-mast in the center of the park, and attaches to it the three charms which are to allure the animals in that direction, viz., a streamer of scarlet cloth two or three yards long, a piece of tobacco and a bison's horn. Every morning at the early dawn he beats his drum, intones his hymns of conjuration, consults his own Wah-kon, and the manitous or guiding spirits of the bisons, in order to discover the favorable moment for the chase.

“The grand master has four runners at his disposal, who go out daily and report to him the result of their observations; they tell at what distance from the camp the animals are, their probable number, and in what direction the herds are marching. These runners frequently go forty or fifty miles in different directions. In all their courses they take with them a Wah-kon ball, which is intrusted to them by the grand master; it is made of hair and covered with skin. When the runners think that the suitable moment has arrived, they immediately dispatch a man of their number to the grand master, with the ball and the good news. So long as the mysterious ball is absent, the master of ceremonies can not take food; he prolongs this rigorous fast by abstaining from every meat or dish that does not come from some animal killed on the area of the park, until the hunt is over; and as they often wait a month or more for the favorable moment of beginning, the grand master must find himself reduced to very small rations, unless he makes some arrangement with his conscience. It is probable that he eats stealthily at night, for he has no more appearance of fasting than his brethren of the camp.

“Let us now suppose all to be in readiness, and the circumstances all favorable to the hunt. The grand master of the park beats his drum, to announce that the bisons are in numerous herds at about fifteen or twenty miles distance. The wind is favorable and comes directly from the point in which the animals are. Immediately all the horsemen mount their coursers; the foot-soldiers, armed with bows,

guns and lances, take their positions, forming two long oblique diverging rows, from the extremity of the two barriers which spring from the entrance of the pen, and extend into the plain, and thus prolong the lines of the inclosure. When the footmen are placed at distances of ten or fifteen feet, the horsemen continue the same lines, which separate in proportion as they extend, so that the last hunter on horseback is found at about two or three miles distance from the pen, and at very nearly the same distance from the last hunter of the other line, in an opposite direction. When men are wanting, women and even children occupy stations. After the formation of these two immense lines, one single Indian, unarmed, is sent upon the best courser in the camp in the direction of the buffaloes to meet them. He approaches against the wind and with the greatest precaution. At the distance of about one hundred paces he envelops himself in a buffalo hide, the fur turned outside, and also envelops his horse as much as possible in the same manner, and then makes a plaintive cry in imitation of that of a buffalo calf. As if by enchantment, this cry attracts the attention of the whole herd; after some seconds, several thousands of these quadrupeds, hearing this pitiful plaint, turn toward the pretended calf. At first they move slowly, then advance into a trot and at last they push forward in full gallop. The horseman continually repeats the cry of the calf, and takes his course toward the pen, ever attentive to keep at the same distance from the animals that are following him. By this stratagem he leads the vast herd of buffaloes through the whole distance that separates him from his companions, who are on the *qui vive*, full of ardor and impatience to share with him in the sport. When the buffaloes arrive in the space between the two lines, the scene changes; all assume an appearance of eagerness. The hunters on horseback, giving rein to their steeds, rejoin each other behind the animals. At once the scent of the hunter is communicated among the frightened and routed animals, which attempt to escape in every direction.

Then those on foot appear. The buffaloes finding themselves surrounded and inclosed on all sides, except the single opening into the circular pen before them, low and bellow in the most frightful manner, and plunge into it with the speed of fear and desperation. The lines of hunters close in gradually, and space becomes less necessary as the mass of buffaloes and the groups of hunters become more and more compact. Then the Indians commence firing their guns, drawing their arrows and flinging their lances. Many animals fall under the blows before gaining the pen; the greater number, however, enter. They discover only too late the snare that had been laid for them. Those in front try to return, but the terrified crowd that follow forces them to go forward, and they cast themselves in confusion into the inclosure, amid the hurrahs and joyful shouts of the whole tribe, intermingled with the firing of guns.

“As soon as all are penned, the buffaloes are killed with arrows, lances and knives. Men, women, and children, in an excitement of joy, take part in the general butchery, and the flaying and cutting up of the animals.

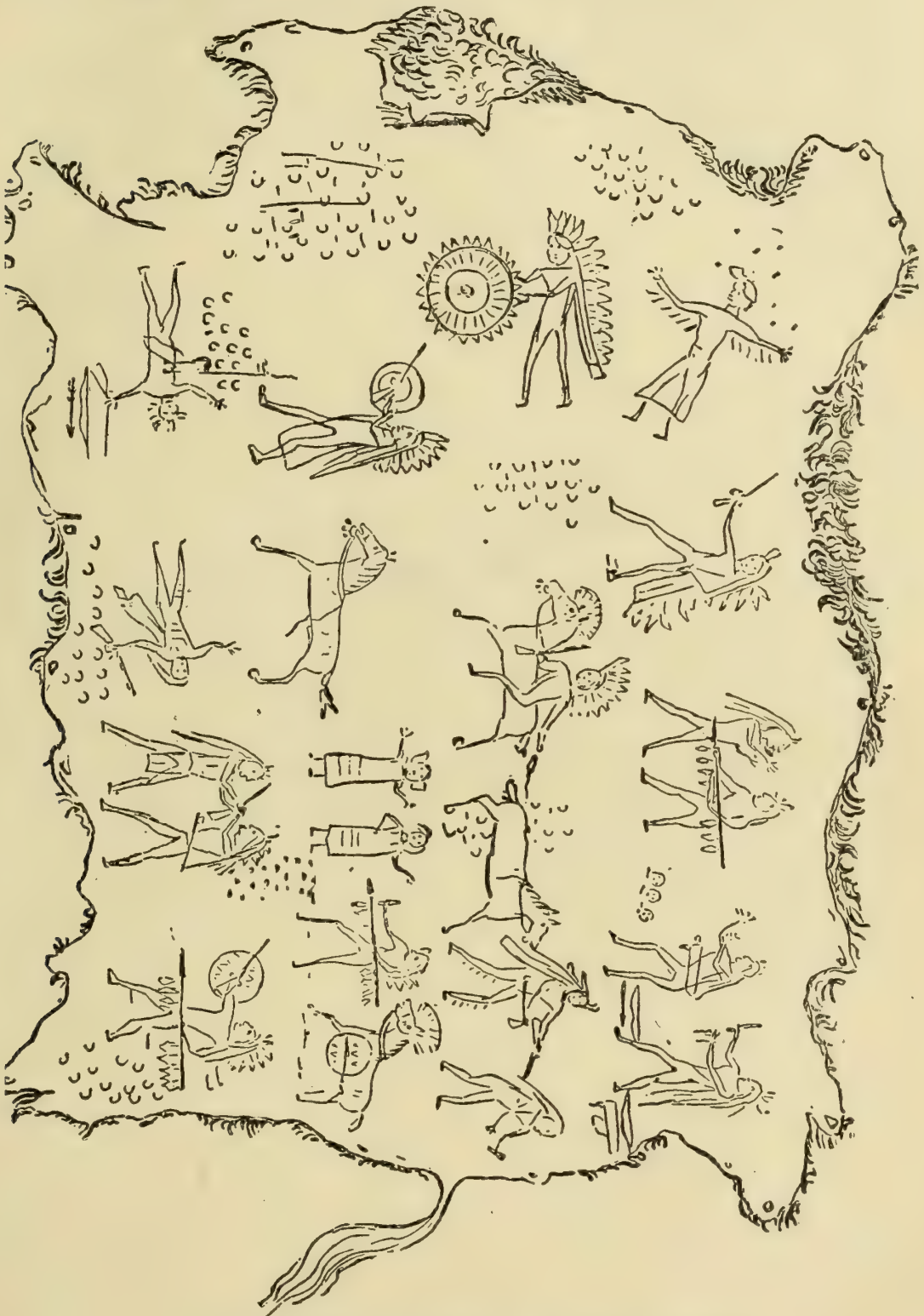
“To look at them without disgust in this operation, one must have been a little habituated to their customs and manners. While men cut and slash the flesh, the women and children in particular devour the meat still warm with life — the livers, kidneys, brains, etc., seem irresistible attractions; they smear their faces, hair, arms and legs with the blood of the buffaloes; confused cries, clamorous shouts, and here and there quarrels, fill up the scene. It is a picturesque and savage scene, a very pandemonium — a sight very difficult to depict by words or to recount in minute details. In the hunt which I have just described and at which I was present, six hundred buffaloes were taken. After the butchery, the flesh and the skins are separated into piles, and these piles are divided among the families, in proportion to the number of which they are composed. The meat is afterwards cut into slices and dried; the bones are bruised and the marrow extracted.

The dogs also receive their portion of the feast, and devour the remains on the arena of the pen. Two days after the hunt not a vestige of the carnage remains. Before separating the Indians spend several days in dancing and mirth. One of your Keyzers or Ver Broeckhovens should assist at one of these spirited, picturesque scenes of the Great Desert; he would find a new subject for a painting.

“The old proverb says: ‘One-half of the world does not know how the other half lives.’ The American Indians who live on the spontaneous products of the soil may say as much; the countless herds of bison that roan over the vast plains, serve as daily bread to the numerous tribes of the Great Desert.”

Mr. Catline, in speaking of the buffalo chase on the Upper Missouri in 1832, says: “During the season of the year whilst the calves are young, the male seems to stroll about by the side of the dam, as if for the purpose of protecting the young, at which time it is exceedingly hazardous to attack them, as they are sure to turn upon their pursuers, who have often to fly to each other’s assistance. The buffalo calf during the first six months is red and has so much the appearance of a red calf in cultivated fields that it could easily be mingled and mistaken amongst them. In the fall, when it changes its hair it takes a brown coat for the winter, which it always retains. In pursuing a large herd of buffaloes at the season when their calves are but a few weeks old, I have often been exceedingly amused with the curious maneuvers of these shy little things. Amidst the thundering confusion of a throng of several hundreds or several thousands of these animals there will be many of the calves that lose sight of their dams; and being left behind by the throng, and the swift passing hunters, they endeavor to secrete themselves, when they are exceedingly put to it, on a level prairie, where naught can be seen but the short grass of six or eight inches in height, save an occasional bunch of wild sage, a few inches higher, to which the poor affrighted things will run, and dropping on their knees will push their noses under it and into the grass,

where they will stand for hours, with their eyes shut, imagining themselves securely hid, whilst they are



ROBE OF MAH-TO-TOH-PA, MANDAU CHIEF.

standing up quite straight upon their hind feet, and can easily be seen at several miles' distance.

“ It is a familiar amusement for us accustomed to these

scenes, to retreat back over the ground where we have just escorted the herd, and approach these little trembling things, which stubbornly maintain their positions, with their noses pushed under the grass, and their eyes strained upon us, as we dismount from our horses and are passing around them. From the fixed position they are sure not to move until hands are laid upon them, and then for the skins of a novice we can extend our sympathy; or if he can preserve the skin on his bones from the furious buttings of its head, we know how to congratulate him on his signal success and good luck. In these desperate struggles for a moment, the little thing is conquered, and makes no further resistance. And I have, often, in concurrence with a known custom of the country, held my hands over the eyes of the calf and breathed a few strong breaths into its nostrils, after which I have with my hunting companions, rode several miles into our encampment with the little prisoner busily following the heels of my horse the whole way, as closely and as affectionately as its instinct would attach it to the company of its dam.

“This is one of the most extraordinary things that I have met with in the habits of this wild country, and although I had often heard it, and felt unable exactly to believe it, I am now willing to bear testimony to the fact from the numerous instances which I have witnessed since I came into the country.”

The buffalo may now (1890) be said to be practically extinct in the United States. Here and there in two or three isolated spots in Montana, Colorado and Idaho occasionally a dozen may be seen. The hunter, merciless sportsmen, Indian, and civilization have contributed to this result. In May, 1886, the Smithsonian Institution dispatched Mr. W. T. Hornaday, with a small expedition, to Idahos, and Montana, to secure, if possible, a few specimens of the buffalo for the National Museum. His expedition resulted in three skeletons of bull buffaloes and some skulls. He found traces of about twenty buffaloes in all of Montana, and these the Indians were following closely. The zoological

garden at Philadelphia contains a number of live buffaloes, good specimens, which furnish study for artists and naturalists. Within twenty years the buffalo was considered almost inexhaustible. The trade in buffalo robes from 1880 to 1885 was more than 100,000 a year, which represented an annual slaughter of that number of animals. To-day Western dealers in buffalo robes are getting their supply from the reserve stock in the Eastern market.

“ He learned of every bird its language,
Learned their names and all their secrets,
How they built their nests in summer,
Where they hid themselves in winter.
Of all the beasts he learned the language,
Learned their names and all their secrets,
How the beavers built their lodges,
Where the squirrels hid their acorns,
How the reindeer ran so swiftly,
Why the rabbit was so timid.”

— *Longfellow.*

CHAPTER XVI.

ARROWS.

The Sioux claim that the Cheyennes first had arrows given them by the Great Spirit, two for hunting, which were black, and two for war, which were red. The Shoshones say that before they met the whites they used poisoned arrow-heads, and for this purpose they were dipped in a compound made of ants pounded to powder and mixed with the spleen of an animal. The mixture was then placed in the sun and allowed to partially decay. The result was such a deadly poison that if the arrow broke the skin in touching a person the result was sure death. The Blackfeet use goose and eagle feathers as arrow guides, while most tribes prefer the feathers of smaller birds.

Much labor was expended in the construction of arrows.

The shafts were made from sprouts of dogwood (*cornus stoloifera*) of a year's growth. After cutting, the bark was removed and the rods were rubbed between two grooved stones, held firmly together in one hand, till reduced to proper size and smoothness. The head, made of hoop-iron, was then inserted in one end of the shaft and bound in position with sinew. The back end of the shaft was now furnished with a triple row of feathers, attached by means of clue and sinew, and the end notched to fit the bow string. With a small chisel-like instrument three slight grooves or channels were cut along the shaft between the head and the feathers, and the arrow was complete. Various reasons were assigned for this channeling. Some claimed that it caused the arrow to adhere more firmly in the wound; others that it was simply designed to facilitate the flow of blood.

The manufacture of arrows, as of bows, was a slow and irksome process. Three or four were probably the limit of a days work, even after the rough material was already on hand. So exact were they in making them that not only were the arrows of different tribes readily distinguishable, but even individuals could recognize their own arrows when thrown together with those of others of the same band. Disputes sometimes arose, after the slaughter of a herd of buffalo, as to whose some particular carcass rightfully was. If the arrow still remained in the body the question was easily decided by drawing it out and examining the make of it. Some Indians made two kinds of arrows, one for hunting, the other for war. In the latter the head was so fastened that when an attempt was made to draw the shaft from the wound the head was detached and remained in the body of the victim.

When an Indian had possessed himself of a good bow and supply of arrows, he was as solicitous in the care of them as a hunter would be of a choice rifle. The bow if not in actual service, was kept close in its case, and the arrows in the quiver. Great pains were taken that they should not become, by any chance, wet, and much time was

spent in handling them that the bow should not lose in spring and that the arrow should not warp. The average length of the former was four feet, of the latter twenty inches.

Mr. Belden in writing of this says, "Let me teach you how to make a good bow and arrow. And first we will begin with the arrow. The shoots or rods must be cut in the arrow season, that is, when the summer's growth is ended. They must not have any branches or limbs on them, but be straight and smooth. The Indians cut their arrows late in the fall, when the timber is hardening, to withstand the blasts of winter. The sticks are not quite so thick as one's little finger, and they are sorted and tied in bundles of twenty and twenty-five. These bundles are two or two and one-half feet in length, and wrapped tightly from end to end with strips of rawhide or elk-skin. The sticks are then hung over fire in the tepee to be smoked and dried, and the wrapping keeps them from warping or bending. When they are seasoned, which takes several weeks, the bundles are taken down, the covering removed, and the bark scraped off. The wood is very tough then and of a yellowish color. The next process is to cut the arrow-shafts exactly one length, and in this great care must be used, for arrows of different length fly differently, and, unless they are alike, the hunter's aim is destroyed. Another reason for measuring the length of the arrows is to identify them, for no two warriors shoot arrows of precisely the same length. Each warrior carries a measuring or pattern stick, and it is only necessary to compare an arrow with the stick to find out to whom it belongs. But should the arrow by chance be of one length, then there are other means of identifying them, for every hunter has his own private mark in the shaft, the head or the feather. Of many thousands I have examined I never found two arrows exactly alike when they were made by different warriors.

"The shafts being made even the next work is to form the notch for the bowstring. This is done with a sharp knife and when made properly, the bottom of the notch will be

precisely in the center of the shaft. The arrow is then scraped and tapered toward the notch, leaving a round head an inch long, near the notch, to prevent the string from splitting the shaft, and to make a firm hold for the thumb and forefinger in drawing the bow.

“ All the arrows are peeled, scraped and notched, and then the warrior creases them. To do this he takes an arrow-head and scores the shaft in zigzag lines from end to end. These creases, or fluted gutters in the shaft, are to let the blood run out when an animal is struck. The blood flows along the little gutters in the wood and runs off at the end of an arrow. The arrow head is made of steel or stone. It is shaped like a heart or dart, and has a stem about an inch long. The sides of the stem are nicked or filled out like saw-teeth. Nearly all the wild Indians now use steel arrow-heads, they being a great article of trade among the savages. When the shaft is ready for the head, the warrior saws a slit with a nicked knife in the end opposite the notch, and inserts the stem of the arrow-head. The slit must be exactly in the center of the shaft, and as deep as the stem is long. When properly adjusted, the teeth of the stem show themselves at each side of the slit. Buffalo, deer or elk sinew is then softened in water, and the wood is wrapped firmly to the arrow-head, taking care to fit the sinew in the teeth of the stem, which will prevent the head from pulling out. The next process is to put on the feathers. To do this properly great care must be taken. Turkey or eagle quills are soaked in warm water to make them spliteasily and uniformly. The feather is then stripped from the quill and put on the shaft of the arrow. Three feathers are placed on each shaft, and they are laid equidistant along the stem. The big end of the feather is fastened near the notch of the shaft and laid six or eight inches straight along the wood. The feathers are glued to the shaft, and wrapped at each end with fine sinew. The arrow is next painted, marked, dried, and is ready for use. It takes a warrior a whole day to make an arrow, for which the trader allows him ten cents.

BOWS.

“The bow — the weapon so long in use among the different Indian tribes of this continent, so typical of Indian life, and the mere mention of which always associates our ideas with the red men — is made of various kinds of wood, and its manufacture is a work of no little labor. Even at this day the bow is much used, and although an Indian may have a gun he is seldom seen without his long bow, and quiver well filled with arrows. The gun may get out of order, and he can not mend it; the ammunition may become wet, and there is an end of hunting; but the faithful bow is always in order, and its swift arrows ready to fly in wet as well as in dry weather. Thus reasons the savage, and so keeps his bow to fall back upon in case of accident.

“Until the invention of breech-loaders, it is a fact well known to frontiersmen, that the bow was a far more deadly weapon at close range than the best rifle. A warrior could discharge his arrows with much greater rapidity and precision than the most expert woodsman could charge and fire a muzzle-loading rifle. The Indian boy's first lesson in life is to shoot with a bow. He is furnished with a small bow and ‘beewaks’ or blunt arrows, so he will hurt nobody, and with these he shoots at marks. By and by, when he has acquired some skill in handling his weapon, he is given small arrow points, and with these he shoots birds, squirrels, and small beasts. As he grows older he receives the long-bow and at last the strong-bow. These strong-bows are powerful weapons, and some of them so stiff that a white man could not bend them scarce four inches, while an Indian would, with apparent ease, draw them to the arrow's head. A shaft fired from one of these bows will go through the body of a buffalo, and arrow's heads have been found so firmly imbedded in the thigh bones of a man that no force could extract them. The parents take great pride in teaching young Indians to shoot, and the development of the muscles and strength of their arms is watched with much interest. A stout arm, ornamented with knots of muscle,

is a great honor to an Indian, and no one but those who can handle the strong-bow are deemed fit for war.

“Of all the Indians of the West, the Sioux and Crows make the best bows. The Sioux bow is generally four feet long, one and a-half inches wide, and an inch thick at the middle. It tapers from the center or ‘grasp’ toward the ends, and is but half an inch wide, and half an inch thick at the extremities. At one end the bowstring is notched into the wood and made permanently fast, while at the other end two notches are cut into the wood, and the string at that end of the bow is made like a slip-knot or loop. When the bow is to be used, the warrior sets the end to which the string is made fast firmly on the ground, and then bends down the other end until the loop slips into the notch. This is called ‘stringing the bow.’ The bow is never kept strung except when in actual use, as it would lose its strength and elasticity by being constantly bent. When unstrung a good bow is perfectly straight, and if properly made and seasoned, will always retain its elasticity.

“When the bow is made of cedar it need not be seasoned; but all other woods require seasoning, and are not worked until perfectly dry. Every tepee has its bow-wood hung up with the arrows in the smoke of the fire, but well out of reach of the flames. A warrior with a sharp knife and a sandstone or file can make a bow in three days if he works hard, but it most generally takes a week, and sometimes a month to finish a fancy bow. When done it is worth three dollars in trade. All the bows differ in length and strength, being gauged for the arms of those who are to use them; but a white man would, until he learned the sleight of it, find himself unable to bend even the weakest war-bow. This has given rise to the impression that the Indian is stronger than the white man, which is an error; for practice will enable a man of ordinary strength to bend a bow as easily and send a shaft as deep or as far as any savage.

“The Crows make bows out of elkhorn. To do this they take a large horn or prong and saw a slice off each side of

it ; these slices are then filled or rubbed down until the flat sides fit nicely together, when they are glued and wrapped



HIS-OO-SAU-CHEES, THE LITTLE SPANIARD.

at the ends. Four slices make a bow, it being jointed. Another piece of horn is laid on the center of the bow at

the grasp, where it is glued fast. The whole is then filed down until it is perfectly proportioned, when the white bone is ornamented, carved and painted. Nothing can exceed the beauty of these bows, and it takes an Indian about three months to make one. They are very expensive and the Indians do not sell them. In traveling the bow is carried in a sheath attached to the arrow-quiver, and the whole is slung to the back by a belt of elk or buckskin, which passes diagonally across the breast and is fastened to the end of the quiver. The quiver and bow-sheath is generally made of the skin of an ox or some wild animal, and is tanned with the hair on. The quiver is ornamented with tassels, fringe of buckskin, and the belt across the breast is painted or worked with beads.

“To shoot with the bow properly, it must be held firmly in the three fingers of the right hand; the arrow is fixed on the bow-string with thumb and forefinger of the left hand, and the other three fingers are used to pull the string. The shaft of the arrow lays between the thumb and forefinger of the right hand, which rests over the grasp of the bow. To shoot, the bow is turned slightly, so one end is higher than the other, and the arrow is then launched.”

A GREAT WARRIOR, COMANCHE.

He was, says Longfellow:—

“Skilled in all the crafts of hunters,
In all youthful sports and pastimes,
In all manly arts and labors.
He could shoot an arrow from him,
And run forward with such fleetness
That the arrow fell behind him.
He could shoot ten arrows upward,
Shoot them with such strength and swiftness
That the tenth had left the bowstring
Ere the first to earth had fallen.”

CHAPTER XVII.

WARFARE.

Military glory constituted the prime object of attainment. It was not indeed such military glory as is gained among civilized nations at the mouth of the cannon, or by charging on the enemy in well drilled squadrons. There were no walled towns to batter down nor moats to scale. But the object of attainment is the same. It is to prove that one set of men are stronger than another. The civilized warrior receives from his monarch a badge of honor or a title; an Indian is satisfied with an eagle's feather fastened to his hair. His step is as proud, his satisfaction for the honor as great and vivid. One of the principal means of cultivating and keeping alive this spirit in the Indian is a public assemblage for reciting the deeds of bravery in the tribe. For this purpose a post is erected at some eligible spot where the whole tribe can conveniently witness the ceremony. This post is painted red, the usual symbolic color of war. Music is provided by the tawaiegan, or drum, and rattles, and by having present a corps of singers, who are adepts in the Indian songs and choruses.

After these preliminary flourishes to excite the feelings of military ardor, a sharp yell gives them notice that one of the warriors present is about to recite his exploits. The music stops at once and gives place to the most profound attention. Dressed out in his brightest "braveries" and war-marks the warrior then steps forward and with his club and lance strikes the painted post. No ancient hero drawn by Homer could exhibit more fire, in words and acts, while he details his exploits. He accompanies every gesture with the precise voice and unction proper to the narrative; and when he finishes his recital, the whole assembly of warriors unite in yells of victory and defiance. The music and singing then recommence and are continued until some other warrior steps forward and recites his

bravery. Hours on hours are thus employed till all who wish have acted their parts.

This ceremony is called: "striking the post." In this manner the war-spirit is fanned. It is a forest school in which the young boys learn their first lesson; and they become the prey of ambition, which is never gratified till they have torn the bloody scalp from an enemy's head.

They had, as well as white men, their military code, with rules and principles, their system of signals, their challenges — except where a bold surprise was essential — their conditions and flags of truce, their cartels and terms of peace through reparation and tribute. We are familiar enough with the aboriginal figures of speech, the "burying" or the "lifting" the hatchet. "Laying down the hatchet," signified the temporary suspension of fighting, as in a truce. "Covering the hatchet," was condoning a cause of feud by presents. It is probably a mistake to suppose that the savages in their own tribal warfare always sought to come upon the enemy in secret surprise; this was their method with the whites; but most frequently the savage enemy had reason to expect a blow. Generally, too, while with provocation and a reasonable hope of success a single tribe would take the war-path alone, alliances were sought for by them, especially when their foes were multiplied. There was in the latter alternative full deliberation of strength, resources and methods. Messengers passed between these allied tribes; the council fires were lighted; the pipe was passed from mouth to mouth; intervals of deep silence were observed, for thoughtfulness and the summoning of wise speech. There was no clamor, no interruption of speakers, whose forest eloquence enlarged upon grievances and deepened hate, roused courage by satire upon the cowardice of the enemy or flattery of the prowess of the hearers. When the speaker closed, a single deep ejaculation was the sole comment on his words. After due pauses, as many orators as were moved to utterance were patiently heard. Those who had best proved their bravery and ardor were most closely listened to. There

was no place for cowards, though words of caution and hesitancy were not discountenanced.

The scene in an Indian village the night preceding the going forth to the fray was hideous and diabolic. The painted, bedizened, and yelling warriors lashed themselves in a fury of passion, with contorted features and writhing gestures, striking their hatchets into the crimson war-post, and imitating the laments and shrieks which they intended to draw from a mastered foe. The clatter of drum and rattle is in keeping with their tuneless music. Thus with all the aspect and array of devils they prepared themselves to strike the blow. The aged and feeble, the women and children, were left in the lodges to await in dread the return of the braves; never, however, disheartening them, but following them with rallying parting cheers of praise and promise. The "war-whoop" is a phrase which has a terrific meaning for those who have quailed before its pandemonium fury. True to their proud friendship with the animals, the braves borrow from bears, wolves, owls, and the rest, those howls and yelps, those skriekings and barkings, by which to strike a panic through their victims and to paralyze their energies.

It was in the early spring of 1883, when about eighty of the Sioux under the leadership of "Old man-afraid-of-his-horses" responded to the invitation of the people at Deadwood and parading the streets gave a performance of their war-songs and dances.

The Indian spent a great deal of time in war, but their attempts to kill their enemies were not often very successful. A very large majority of war parties returned without scalps. Small parties were usually more successful than large ones, as they could move with more celerity and secrecy. If the party was small it generally withdrew precipitately, after striking a single blow, or as soon as the enemy was alarmed, whether it had succeeded in taking a scalp or not. If the party was a very strong one, and supplied with provisions, it might, after killing one or more, wait awhile for an attack, but it was not the practice

of the Indian, after having taken one or more scalps, to go on farther in quest of more, or remain in the enemy's country after being discovered. No matter how many were in a war party, nor how far they had traveled in the pursuit of an enemy, if a single scalp was taken the expedition was not considered a failure.

Dakota war parties were seldom led by the chiefs, though they sometimes accompanied them. They were led by volunteers who claimed to have received their commission by revelation from some superior being, who commanded them to make war, and promised them success. When such a leader offered himself, the warriors could do as they pleased about following him. If they had confidence in his abilities, or credentials, he could raise a large party. If not, he could get few followers. His office lasted only during the time of the expedition. Sometimes a few young men started off to look for scalps without the usual formalities and without a leader. Such small unauthorized parties were quite as likely successful as any.

You may have noticed, perhaps, an eagle's feather with a red spot, in the head-gear of some Indian. It is a badge that he has killed a foe. If the feather is notched and bordered with red, it signifies that a throat has been cut. The red hand on a blanket shows that the woman has been wounded by an enemy.

HOW THE CANOE WAS MADE.

“ Give me of your bark, O Birch Tree,
Of your yellow bark, O Birch Tree,
Growing by the rushing river,
Tall and stately in the valley.
I a light canoe will build me,
That shall float upon the river,
Like a yellow leaf in autumn,
Like a yellow water lily.

Lay aside your cloak, O Birch Tree,
Lay aside your white skin wrapper,

For the summer time is coming,
And the sun is warm in heaven,
And you need no white skin wrapper.

Thus aloud cried Hiawatha,
In the solitary forest,
When the birds were singing gaily.

With his knife the tree he girdled ;
Just beneath its lowest branches,
Just above the roots he cut it,
Till the sap came oozing outward ;
Down the trunk from top to bottom,
Sheer he cleft the bark asunder,
With a wooden wedge he raised it,
Stripped it from the trunk unbroken.

Give me of your boughs, O Cedar,
Of your strong and pliant branches,
My canoe to make more steady,
Make more strong and firm beneath me !

Down he hewed the boughs of cedar,
Shaped them straightway to a framework,
Like two bows he formed and shaped them,
Like two bended bows together.

Give me of your roots, O Tamarock,
Of your fibrous roots, O Larch Tree !
My canoe to bind together,
So to bind the ends together,
That the water may not enter,
That the river may not wet me !

From the earth he tore the fibres,
Tore the tough roots of the larch tree,
Closely sewed the bark together,
Bound it closely to the framework.

Give me of your balms, O Fir Tree,
Of your balsam and your resin,
So to close the seams together
That the water may not enter,
That the river may not wet me.

And he took the tears of balsam,
Took the resin of the fir tree,
Smeared therewith each seam and fissure,
Made each crevice safe from water.

Give me of your quills, O Hedgehog!
I will make a necklace of them,
Make a girdle for my beauty,
And two stars to deck her bosom!

From a hollow tree the hedgehog
With his sleepy eyes looked at him,
Shot his shining quills, like arrows,
Saying with a drowsy murmur,
Through the tangle of his whiskers,

“ Take my quills, O Hiawatha! ”
From the ground the quills he gathered,
All the little shining arrows,
Stained them red and blue and yellow,
With the juice of roots and berries;
Into his canoe he wrought them

Round his waist a shining girdle,
Round its bows a gleaming necklace,
On its breast two stars resplendent.

Thus the birch canoe was builded,
In the valley, by the river,
In the bosom of the forest;
And the forest's life was in it,
All its mystery and its magic,
All the lightness of the birch tree,
All the toughness of the cedar,
All the birch's supple sinews,
And it floated on the river
Like a yellow leaf in Autumn,
Like a yellow water-lily.”

LONGFELLOW.

CHAPTER XVIII.

SCALPING.

This custom, practiced by all the North American Indians, is done when an enemy is killed in battle, by grasping, with the left hand, the hair on the crown of the head and passing the knife around it through the skin, tearing off a piece of the skin with the hair as large as the palm of the hand or larger, which is dried, and often curiously ornamented. This piece is preserved and highly valued as a trophy. The scalping is an operation not calculated of itself to take life, as it only removes the skin without injuring the bone of the head. To be a genuine scalp only the crown of the head, or that part which lies directly over what the phrenologists call "self-esteem," where the hair divides and radiate from the center, can be taken. This will prevent taking two or more scalps from one head. Besides taking the scalp the victor generally, if he has time to do it without endangering his own scalp, cuts off and brings home the rest of the hair, which his wife will divide into a great many small locks and with them will fringe off the seams of his shirt and leggins. These so-called "scalp-jackets" were buried with the owner; so that a war chief took with him his insignia of rank beyond the grave. As only locks of the scalp taken by the individual could be worn on his dress, the Indians said that "when a man was dressed in this way he wore his badge of bravery, — of courageous deeds performed; he walked a chief."

The scalp, then, is a patch of the skin taken from the head of an enemy killed in battle, and preserved and highly appreciated as the record of a death produced by the hand of the individual who possesses it, and may oftentimes during his life-time be of great service to a man living in a community where there is no historian to enroll the names of the famous, to record the heroic deeds of the brave, who have gained their laurels in mortal com-

bat with the enemies, where it is as lawful and as glorious to slay an enemy in battle as it is in Christian communities, and where the poor Indian is bound to keep the record himself, or to lose it and the honor, for no one in the tribe will keep it for him. As the scalp is taken, then, as the evidence of death, it will easily be seen that the Indian has no business or inclination to take it from the head of the living. It may be, though, that in the heat of battle a man may be stunned by the blow of a weapon, or a gunshot, and the Indian, rushing over his body, snatch off his scalp supposing him dead. Cases of this kind have not been unfrequent,



SCALPING BY NORTH AMERICAN INDIANS.

and the scalplless survivor wears a bald spot on his head the remainder of his life as the only consequence.

The scalp must be from the head of an enemy or it subjects its possessor to disgrace and infamy. There may be many instances where an Indian is justified, in the estimation of his tribe, to take the life of one of his own people, and their laws are such as oftentimes make it his imperative duty, and yet no circumstance, however aggravating, will justify him or release him from the disgrace of taking the scalp.

There is no custom practiced by the Indians for which

they are more universally condemned than that of taking the scalp; and at the same time there is some excuse for them, inasmuch as it is a general custom of the country, and founded like many other apparently absurd and ridiculous customs of these people, in one of the necessities of Indian life, which necessities we are free from in the civilized world. From an ancient custom "time out of mind," the warriors of these tribes have been in the habit of going to war, expecting to take the scalps of their enemies whom they may slay in battle, and all eyes of the tribe are upon them, making it their duty to do it. So from custom it is every man's right and his duty also, to continue and keep up a regulation of his society which it is not in his power as an individual to abolish or correct, if he saw fit to do so.

Many of the Indians wear a scalp-lock. When the boy reaches the age of five years the mother marks it on the top of the head where the crown or curl is, and the hair, on a spot about two inches in diameter, is braided. The braid is formed of three strands, and the circle is marked by pulling out the hair. The little circular patch is painted; usually with red ochre. The hair of the head is parted in the middle and the parting extended to the circle. The scalp-lock seems meant to be a mark of manhood and defiance, a sort of "take it if you dare and can" idea.

When a war party returns from a war excursion bringing home with them the scalps of their enemies they generally dance for fifteen nights in succession, vaunting forth the most extravagant boasts of their wonderful prowess in war, whilst they brandish their war-weapons in their hands. A number of young women are selected to aid (though they do not actually join in the dance) by stepping in the center of the ring and holding up the scalps that have been recently taken whilst the warriors dance, or rather jump, around in a circle, brandishing their weapons, and barking and yelping in the most frightful manner, all jumping on both feet at a time with a simultaneous stamp and blow; and thrust their weapons, with which it would seem they were actually cutting and carving each other to pieces. During these frantic

leaps and yelps and thrusts every man distorts his face to the utmost of his muscles, darting about his glaring eyeballs, and snapping his teeth as if he were in the heat, and actually breathing through the inflated nostrils the very hissing death, of battle. In former years the Sioux Indians, if they had time, cut off the heads of their slain enemies and took them to their first camp after the fight, where the entire scalp was taken off. To make it particularly fine, they kept on the ears with the rings and ornaments. In case a woman had lost some of her kin by death, and her heart was, as they say, "bad," she was at times allowed to go with the war-party, remaining in the camp made near the point of attack. The head of a slain foe would be given her, and, after removing the scalp, she would make her heart "good" by smashing the skull with a war-club.

CHAPTER XIX.

THE SWEAT-LODGE.

Captain W. P. Clark, U. S. A., gives a most interesting account of a bath which he took in a Sweat-Lodge, in August, 1881, at a Cheyenne Camp, near Fort Keogh, Montana. He says: "I spoke to the chief and made an appointment. I had no interpreter, and could only talk with the Indians in the sign language, but about two o'clock one afternoon, I rode to the camp. The tepees were located on the banks of the Yellowstone river, in the midst of some stately cottonwood trees. The atmosphere was smoky, and a filmy vail of blue mantled the not distant bluffs of the Bad Lands. A lazy hush had settled on this struggling little Indian village on this hazy day, which so gently heralded the near approach of autumn. I arrived before the preparations were made, and so had the benefit of witnessing all that was done. The squaws turned out to cut somewood, and soon a pile was ready near the Sweat-Lodge,



SHA-BASH-KONG, HIGH PRIEST, AND HIS TWO WIVES.

which in the meantime was covered, first with some untanned buffalo skins, leaving only a small entrance, and then with canvas and blankets. This lodge was made of twelve willows, four on each side and two at each end, placed in the ground nearly in the shape of an ellipse, then bent over and fastened, so that the frame was not quite four feet high. The ground inside had been smoothed off and strewn with leaves and grass. In the center was a circular hole about eighteen inches in diameter and twelve deep; this was carefully cleaned out, so that only fresh dirt remained. The squaws laid down a row of sticks a few feet outside the entrance to the lodge, and then placed a row of small stones, about six inches in diameter, on these sticks, then some more wood and then stones, till a crib about two feet high and three feet wide and four long, was made, which was then set on fire.

“In the meantime I had gone into some tall weeds and thick bushes near at hand, which formed a perfect screen, and arrayed myself, by means of a borrowed strap and towel, in a breech cloth, and stepped forth for the bath. The chief brought his pipe, tobacco, medicine-rattle and much of his war outfit, which were first placed inside. He, with the little stick used for cleaning the Indian pipe, drew the figure of a man without arms or legs in the dirt at the bottom of the hole. A buffalo-skull white with age was placed just in front of the little door. We had crowded in, and were seated tailor-fashion on the ground. The chief filled the pipe, putting a little tobacco in the hole, and mixing with the tobacco some sweet-smelling dry grass. He lighted the pipe and pointed the stem to the zenith, to the figure in the hole, to the painted buffalo skull outside, and to the four winds, at the same time muttering a prayer. After taking a few puffs, or rather inhalations, he passed the pipe to me. When we had finished smoking, the stones had reached a red heat, and about this time we were joined by five other Indians, so that we were pretty closely packed in.

“The squaw passed in one of the stones, using a forked stick, which was placed in the center of the hole, and upon it

the chief dropped a few bits of sweet smelling grass, which, as it burned, gave out a pleasant fragrance. His rattle and other trappings were then handed outside. One of the medicine bags was placed on the buffalo skull, and the rest were laid on the roof of our little house. The other stones were then handed in, and when carefully piled in the hole reached about a foot above the surface of the ground. The skins and canvas were then let down over the door, and we were suddenly in total darkness. The heat became intense. There was a report like a pistol shot, but from the sounds I knew the chief had taken some water in his mouth and spouted it out upon the stones. Waves of hot air and steam passed over me, which seemed more like liquid fire than steam and air. A hand touched my right arm and moved down to my hand, and I then felt a wooden bowl of water handed me. I supposed it was intended that I should take a swallow, which I did, and passed it to the Indian at my left. I was sitting upright, and my head touched the roof of the little house. My hair was so hot that I could hardly touch my hand to it. I was becoming dazed and dizzy with the heat. The perspiration ran off my body in huge drops. I could not talk to the Indians, as I did not understand half a dozen words of their vocal language, and in the intense darkness signs could not be used. Of course with a slight effort I could have raised some of the skins which formed the covering to the lodge, as they were only fastened to the ground by a few stones, but my pride would not let me do this. I felt that I was physically and mentally cooked. The chief, who was also a medicine-man, from time to time sang in a weird chanting way. Suddenly the covering of the lodge was raised at the door and opposite it, and the sunshine blasted in, and the cool air swept gratefully over me. The copper colored form of the Indians were all bowed, the heads near the ground, on their bended knees.

“ This was not in worship, but merely to avoid the extreme heat of the top of the little lodge ; it brought their heads nearer the hot stones, but still the heat was not nearly

intense as at the top. I also noticed that the hair of the Indians was wet. Instead of swallowing the water they had held in their mouths for a moment, and then spouting it into the curved hands, had saturated their hair with it. I at once poured some water from the bowl on my head, thoroughly saturating my hair, and it seemed to clear my brain as from a hot mist. The covering of the lodge remained up some moments, and was then closed as before. This time I held my head down, and my hair being wet, I experienced no uncomfortable sensations. A mouthful of water only was blown upon the stones as before (sometimes a little musk or something of the kind is held in the medicine-man's mouth, so that a pungent odor is emitted as this water is blown upon the stones). The covering was raised and lowered four times, and then quite a quantity of water was poured upon the stones, filling the little house full of hot steam. We all went then to the river and plunged in, and felt greatly refreshed. Had I understood the necessity of wetting my hair and keeping my head near the ground, I do not think I should have experienced any ill-effects from the bath; as it was I was half ill for three or four days, and I attributed it to the overheating. I am accustomed to taking Turkish and Russian baths, and have been in a hot room for some time when the thermometer indicated one hundred and seventy degrees, and gone from this through different stages to nearly ice-cold water, but I have never experienced anything like the cooking I got in that Cheyenne Sweat-Lodge, and I am confident it was their ordinary bath. Women and little children join the men in these baths."

The spring of the year, just as the snow is disappearing, seems to be a favorite time for the Cheyennes to indulge in this bath; and at this time they make "medicine" for a speedy disappearance of the snow, quick growth of the grass, and prompt fattening of all the animals. I once saw an old man, seventy-six years of age, walking around on the snow perfectly naked, except for his breech-cloth, both before and after taking one of these baths.

When vision-seeking, the dreamers do not, I believe, have the skins raised, but try and secure supernatural knowledge by enduring the hot air and steam for prolonged periods.

These baths are also taken by persons who are greatly angered or depressed by the loss of friends or kin by death. I know a Sioux chief whose little son, the pride of his heart, was taken suddenly sick and died. His sorrow and anger made him a dangerous creature to meet. His friends put him into one of these baths and "washed his grief away."

Briefly then, as an Indian once said to me, the Sweat-Lodge is made as a "medicine" to ask of the Great Spirit anything we want. If one is sick or has anything the matter with him, they go in and ask the Great Spirit to heal them; and all go to ask for assistance and guidance.

The figure in the bottom of the hole indicated what was specially wished and prayed for, a figure of a man without limbs indicated a wish to kill an enemy; a pony track, to steal ponies.

It is considered specially good luck for the medicine-man to take the bath with others, and he is master of ceremonies. As they lived mostly on buffalo, the head was placed in front of the Sweat-Lodge that they might pray to it; might not forget to petition the Great Mystery of the Universe to perpetuate the buffalo and have them always near their village.

CHAPTER XX.

COUNTING TIME.

The Dakotas have names for the natural division of time. Their years they ordinarily count by winters. A man is so many winters old, or so many winters have passed since such an event. When one is going on a journey, he does not usually say that he will go back in so many days, as

we do, but in so many nights or sleeps. In the same way they compute distance by the number of nights passed in making the journey. They have no division of time into weeks. Their months are literally moons. The popular belief is that when the moon is full, a great number of very small mice commence nibbling on one side of it, which they continue to do until they have eaten it all up. Soon after this another moon begins to grow, which goes on increasing until it has reached its full size, only to share the fate of its predecessor; so that with them the new moon is really new, and not the old one re-appearing. To the moons they have given names, which refer to some prominent physical fact that occurs about that time in the year.

Five moons are usually counted to the winter, and five to the summer, leaving only one each to the spring and autumn; but this distinction is not closely adhered to. The Dakotas often have warm debates, especially towards the close of the winter, about what moon it is. The raccoons do not always make their appearance at the same time every winter; and the causes which produce sore eyes are not developed precisely at the same time in each successive spring. All these variations make room for strong arguments in a Dakota tent for or against *Wi-cata-wi* or *Istawicayazan-wi*.

But the main reason for their frequent difference of opinion in regard to this matter, viz., that twelve lunations do not bring them to the point from which they commenced counting, never appears to have suggested itself. In order to make their moons correspond with the seasons they are obliged to pass one over every few years.

DAKOTA METHOD OF COUNTING.

Counting is usually done by means of their fingers. If you ask some Dakota how many there are of anything, instead of directing their answer to your organs of hearing, they present it to your sight, by holding up so many

fingers. When they have gone over the fingers and thumbs of both hands, one is temporarily turned down for one ten. Eleven is ten more one, or more commonly again one; twelve is again two, and so on; nineteen is the other nine. At the end of the next ten another finger is turned down, and so on. Twenty is two tens, thirty is three tens, etc. Opawinge, one hundred, is probably derived from pawinga—to go around in a circle or to make gyrations, as the fingers have all gone over again for their respective tens. The Dakota word for one thousand, keptopawinge, may be formed of “ake” and “opawinge,” hundred again, having now completed the circle of their fingers in hundreds and being about to commence again. They have no separate word to denote any higher number than a thousand. There is a word to denote one half of anything but none to denote any smaller aliquot part.

They count years by winters, and compute distances by the numbers of nights passed on a journey. Their months are computed by moons, and are as follows: 1. Wi-teri, January, the hard moon. 2. Wicata-wi, February, the raccoon moon. 3. Istawiczayan-wi, March, the sore-eye moon. 4. Magaokada-wi, April, the moon in which the geese lay eggs; also called Wocakla-wi, and sometimes Watopapi-wi, the moon when the streams are again navigable. 5. Wojupi-wi, May, the planting moon. 6. Wajustecasa-wi, June, the moon when the strawberries are red. 7. Canpasapa-wi and Wasunpa-wi, July, the moon when the choke-cherries are ripe, and when the geese shed their feathers. 8. Wasunton-wi, August, the harvest moon. 9. Psihnakkett-wi, September, the moon when rice is laid up to dry. 10. Wi-wajupi, the drying rice moon; sometimes written Wazupi-wi. 11. Takiyura-wi, November, the deer rutting moon. 12. Tahec-apsun-wi, December, the moon when the deer shed their horns.

CHAPTER XXI.

THE CALUMET.

The "Calumet," first mentioned under this Indian name by DeSoto, is familiar to us as the emblem of peace when smoked and passed from hand to hand in an interview or council. The Dakotas are great smokers. The Red Pipe Stone Quarry, which, according to their tradition, is the assembling place of the nations, is in the land of the Dakotas. The tobacco is furnished by the trader; and the Indian finds the "Kinnekenick" growing along the streams. This is the inner bark of the dogwood, and also of a species of willows, which is scraped off and dried, and then mixed with the tobacco to moderate and flavor the smoke. When the Dakotas are without pipe and tobacco they are usually not in a good humor. A boy learns to smoke when quite young, but a girl is not expected to indulge in that way till she becomes a woman, and occasionally you will find a woman who does not smoke. Smoking takes up much of their time when they are awake.

A man, when alone, lights his pipe and smokes frequently. But, when two or more are together, the pipe is kept going around, and seldom or never gets cold. If an Indian meets another on the prairie, they sit down and smoke before they talk. At their feasts, before and after eating, they smoke, but especially before; indeed the pipe, on many of these occasions, is held up reverently to the Great Spirit or to the god they wish to propitiate, and the prayer is offered, "Have mercy on me." As smoking is a luxury so highly valued by the Indians, they have bestowed much pains and no little ingenuity, on the construction of their pipes. The bowls of these are generally made of the red-steatite (Catlinite) or "pipe-stone" and many of them designed and carved with much taste and skill, with figures and groups in alto-relievo standing or inclining upon them.

When the terms of a treaty have been agreed upon, the

sacred pipe, the stem of which is ornamented with eagle's quills, is brought forward, and the solemn pledge to keep



SOU-MICK-O-SUCKS, THE BUFFALO'S BLACK FAT.

CHIEF OF THE BLACKFEET.

the peace is passed through the sacred stem by each chief and warrior drawing the smoke once through it. After

this ceremony is over, the warriors of the two tribes unite in the dance, with the pipe of peace held in the left hand, and a rattle in the right. The material for the pipes is mostly obtained from the Red-Pipe Stone Quarry near Pipestone, Minn., and a peculiar sacredness is in the Indian mind attached to the place. Numerous high bluffs surround it, and the alluvial flat below these, in which the quarry is situated, contains a huge boulder that rests upon a flat rock of glistening smooth appearance, the level of which is but a few inches above the surface of the ground. Upon the portion of this rock not covered by the boulder above and upon the boulder itself are carved sundry wonderful figures, lizards, snakes, otters, Indian gods, rabbits with cloven feet, muskrats with human feet, and other strange and incomprehensible things, all cut into the solid granite, and not without a great deal of time and labor expended in the performance. The commoner Indians, even to this day, are accustomed to look upon these with feelings of mysterious awe, as they call to mind the legend connected therewith.

“A large party of Ehanktonwanna and Teetonwan Dakotas, says the legend, “had gathered together at the quarry to dig the stone. Upon a sultry evening, just before sunset, the heavens suddenly became overclouded, accompanied by heavy rumbling thunder, and every sign of an approaching storm, such as frequently arises on the prairie without much warning. Each one hurried to his lodge expecting a storm, when a vivid flash of lightning, followed immediately by a crashing peal of thunder, broke over them, and, looking towards the huge boulder beyond their camp, they saw a pillar or column of smoke standing upon it, which moved to and fro, and gradually settled down into the outline of a huge giant, seated upon the boulder, with one long arm extended to heaven and the other pointing down to his feet. Peal after peal of thunder, and flashes of lightning in quick succession followed, and this figure then suddenly disappeared. The next morning the Sioux went to this boulder and found these figures and

images upon it, where before there had been nothing; and ever since the place is looked upon as wakan or sacred.

The legend of the Pipe Stone Quarry has thus been beautifully immortalized by the poet Longfellow:—

THE PEACE-PIPE.

1.

From the Mountains of the Prairie,
On the Great Red Pipestone Quarry,
Gitche Manito the mighty,
He the Master of Life descending
On the red crags of the quarry
Stood erect, and called the nations.
Called the tribes of men together.

2.

From his footprints flowed a river,
O'er the precipice plunging downward,
Gleamed like Ishkoodah, the comet.
And the Spirit, stooping earthward,
With his finger on the Meadow
Traced a winding pathway for it,
Saying to it, "Run in this way!"

3.

From the red stone of the quarry
With his hand he broke a fragment
Moulded it into a pipe-head,
Shaped and fashioned it with figures;
From the margin of the river
Took a long reed for a pipe-stem,
With its dark green leaves upon it;
Filled the pipe with bark of willow,
With the bark of the red willow;
Breathed upon the neighboring forest,
Made its great boughs chafe together,
Till in flame they burst and kindled;
And erect upon the mountains
Gitche Manito, the Calumet, the Peace-Pipe,
As a signal to the nations.

4.

And the smoke rose slowly, slowly,
Through the tranquil air of morning,
First a single line of darkness,
Then a denser, bluer vapor,
Then a snow-white cloud unfolding,
Like the tree-tops of the forest,
Ever rising, rising, rising,
Till it touched the top of heaven,
Till it broke against the heaven,
And rolled outward all around it.

5.

From the Vale of Tawasentha,
From the Valley of Wyoming,
From the groves of Tuscaloosa,
From the far-off Rocky Mountains,
From the northern lakes and rivers,
All the tribes beheld the signal,
Saw the distant smoke ascending,
The Puckwana of the Peace-Pipe.

6.

And the prophets of the nations
Said, " Behold it, the Puckwana !
By this signal from afar off,
Bending like a wand of willow,
Waving like a hand that beckons,
Gitche Manito, the mighty,
Calls the warriors to his council ! "

7.

Down the rivers o'er the prairies,
Came the warriors of the nations,
Came the Delawares and Mohawks,
Came the Choctaws and Comanches,
Came the Shoshones and Blackfeet,
Came the Pawnees and Omahas,
Came the Mandans and Dacotahs,
Came the Hurons and Ojibways,
All the warriors drawn together
By the signal of the Peace-Pipe,
To the Mountains of the Prairie,
To the Great Red Pipestone Quarry.

8.

And they stood there on the meadow,
With their weapons and their war-gear,
Painted like the leaves of autumn,
Painted like the sky of morning,
Wildly glaring at each other;
In their faces stern defiance,
In their hearts the feuds of ages,
The hereditary hatred,
The ancestral thirst of vengeance.

9.

Gitche Manito, the mighty,
The creator of the nations,
Looked upon them with compassion,
With paternal love and pity;
Looked upon their wrath and wrangling
But as quarrels among children,
But as feuds and fights of children!

10.

Over them he stretched his right hand,
To subdue their stubborn natures,
To allay their thirst and fever,
By the shadow of his right hand;
Spake to them with voice majestic
As the sound of far-off waters,
Falling into deep abysses,
Warning, chiding, spake in this wise: —

11.

“O my children, my poor children,
Listen to the words of wisdom,
Listen to the words of warning
From the lips of the Great Spirit,
From the Master of Life, who made you!

12.

“I have given you lands to hunt in,
I have given you streams to fish in,
I have given you bear and bison,
I have given you roe and reindeer,
I have given you brant and beaver,
Filled the marshes full of wild-fowl,

Filled the river full of fishes;
Why then are you not contented?
Why then will you hunt each other?

13.

“ I am weary of your quarrels,
Weary of your wars and bloodshed,
Weary of your prayers for vengeance,
Of your wranglings and dissensions;
All your strength is in your union,
All your danger in discord;
Therefore be at peace henceforward,
And as brothers live together.

14.

“ I will send a Prophet to you,
A deliverer of the nations,
Who shall guide you and shall teach you,
Who shall toil and suffer with you.
If you listen to his counsels,
You will multiply and prosper;
If his warnings pass unheeded,
You will fade away and perish !

15.

“ Bathe now in the stream before you,
Wash the war-paint from your faces,
Wash the blood-stains from your fingers,
Bury your war-clubs and your weapons,
Break the red stone from this quarry.
Mould and make it into Peace-Pipes,
Take the reeds that grow beside you,
Deck them with your brightest feathers,
Smoke the calumet together,
And as brothers live henceforward ! ”

16.

Then upon the ground the warriors
Threw their cloaks and shirts of deer-skin,
Threw their weapons and their war-gear,
Leaped into the rushing river,
Washed the war-paint from their faces;
Clear above them flowed the water,
Clear and limpid from the footprints

Of the Master of Life descending;
Dark below them flowed the river,
Soiled and stained with streaks of crimson,
As if blood were mingled with it!

17.

From the river came the warriors,
Clean and washed from all their war-paint;
On the banks their clubs they buried,
Buried all their war-like weapons.
Gitche Manito, the mighty,
The Great Spirit, the creator,
Smiled upon his helpless children!

18.

And in silence all the warriors
Broke the red stone of the quarry,
Smoothed and formed it into Peace-Pipes,
Broke the long reeds by the river,
Decked them with their brightest feathers,
And departed each one homeward,
While the Master of Life descending
Through the opening of cloud-curtains,
Through the doorways of the heaven,
Vanished from before their faces,
In the smoke that rolled around him,
The Puckwana of the Peace-Pipe!

There is great regularity in the operation of smoking the pipe. The Indians always pass around the pipe, the first man puffing a few whiffs, and then handing it to the one next to him. One person takes hold of the pipe-stem at a certain place, the next one above, and the next one below alternately. Should any one fail to observe this order, whether white man or Indian, he cannot get the pipe until he takes hold of it in the proper way. The reason given is, that it is their 'medicine;' that no two men, sitting side by side, shall handle the pipe in the same way. It is also very common for a man, on receiving the pipe, to point the bowl toward the ground, and the stem toward the heavens. There is, perhaps, no more interesting ceremony than that of smoking. It is to them a great luxury, and

as they sit in groups around, puffing out large volumes of smoke, and conversing in a low, quiet tone of voice, they present the most perfect picture of happiness and contentment.

CHAPTER XXII.

DANCES.

Dancing is one of the principal and most frequent amusements of the aboriginals, and both vocal and instrumental music are made use of. These dances consist of about four different steps, which constitute all the different varieties, but the figures and forms of these scenes are most numerous and produced by the most violent jumps and contortions, accompanied with the songs and beats of drums, which are given in exact time with their motion. Dancing enters into their forms of worship and is often their mode of appealing to the Great Spirit, of paying their usual devotion to their "medicine," and of honoring and entertaining strangers of distinction in their country. There are many kinds of dances, most important of which are: the sun-dance, the ghost-dance, the bear-dance, the green-corn-dance, the buffalo-dance, eagle-dance, warriors-dance, war-dance, braves-dance, begging-dance, calumet-dance, pipe-dance, scalp-dance, and many others.

SUN DANCE.

This dance is really a feature of the original religion of the Indian in his wild state. No young man is considered a warrior until after he has subjected himself to the tortures of the Sun Dance, which takes place about the last of June each year. After a place has been selected by some of the head men of the tribe, the squaws build a large awning composed of brush and inclosing a circle similar to a circus ring, covering a piece of ground about 150 feet in diameter.

The pole is then selected by a prominent medicine-man, and has to be cut by a young squaw, who must be a virgin; it is then consecrated and prayed over in regular style, and set up in the middle of the inclosure. To the top of this long thongs of rawhide are attached, which reach nearly to the ground, and the lower end is attached to a rawhide thong which in its turn is attached to two small sticks of very tough wood, these sticks having previously been passed through the flesh of the breast of the young Indians who propose to devote themselves to the Great Spirit, and undergo this torture to show the Spirit how brave they will be in war. After all the attachments have been made, a large number of Indian bucks form a circle around the devotees and dance to the music of a little bore-whistle which they blow incessantly. The young men who are undergoing torture in the meantime are trying to tear the flesh away from their bodies by bearing their entire weight on the thong attached to their flesh. Some instances have been known where they have fallen back on the rope as many as twenty times, and suffer torture from fifteen minutes to half an hour before their flesh tears out and lets them loose, and extreme cases have been known when a medicine-man has thrown himself on the tortured Indian and torn him loose by adding his weight to that of the Indian undergoing torture. After this performance all participate in a huge dog-feast, often as many as a hundred dogs being dished up. This meat is highly appreciated by the Indians, in fact no morsel is so choice as a slice of a young fat puppy. At the feast every one is expected to gorge himself to such an extent that he or she is glad to sleep off the effects, which sleep is like unto the sleep of a drunken man, so heavy is it. The Indians appear in full evening dress, being fantastically painted from the tops of their heads to their waist, and from there down, the only covering is a breech-cloth, a small one at that, with a tomahawk attached, while on their heads are the only ornaments which may be fully appreciated.

THE GHOST DANCE.

The recent messiah craze among the Indians was simply a form of worship, and instituted by the "medicine-men" for profit, the same as "protracted meetings" or "revivals" are organized among the whites by evangelists. The "Ghost Dance," as it was called, was but one of a series of such dances which have come into prominence every four or five years as far back as we have any knowledge of the Sioux Indians. In matters of religion and forms of worship, the average Indian is as confiding and as easily duped as the average white man. In the recent outburst of religious zeal and enthusiasm, in the Wa-ka, Chin-chah Wa-che of God's son's dance, commonly known as the "Ghost Dance," Short Bull took advantage of the Indians' ignorance and credulity and his own skill in the art of sleight of hand — he being a Sioux Herrmann of no mean accomplishments — and profited thereby. Short Bull, like the noted Herrmann, always has to have a helper, who is on to all the tricks. In the Ghost Dance, Short Bull would tell his helper to pray for anything he wanted — which was understood to be meat, for that was the one thing desired by the average Indian at that time; and he got wa-sna, a favorite dish with the Indians, a rarity and a delicacy rather. This wa-sna consists of meat and tallow and dried berries pounded into a sort of hash, and after it stands until it gets hard, it will keep the year round. This meat was supplied by Short Bull, and the plate kept supplied by him by means of his wizard art.

Another one of his tricks was what may be called the "pipe trick." This consisted in setting three ordinary smoking pipes with the bowl in the ground, and then say to his helper, he might pray for meat, and it would come in either pipe he wished, if he would but designate one. After a pipe was designated, Short Bull would pow wow over the pipe for a short time, when a piece of bacon would be seen sticking in the designated pipe — just where the wily Sioux had dexterously placed it.

Such dances have been common in the past. In 1884, there was the Ome-ha Wache or ching-to-ene dance; in 1875, the great Ose-che Wa-che, or Storm dance, at the Whetstone agency. This dance was repeated at Rosebud agency in the spring of 1879, and in the summer of 1880 excitement ran very high, the Indians going so far as to dig holes in the ground in order that they might protect themselves from the storm fiend. A medicine-man known as Ege-mo-coo-tle or Shooting Cat prophesied a hail storm, and a very disastrous one occurred in July, killing both Indians and stock. At Fort Robinson in 1872 was held the Wa-ka Wa-che, or Holy dance, in which the Indians dance in a circle around the medicine-man, who went into a trance and answered (for a consideration) all questions asked — a sort of Sioux seance. While the agency was yet on Whetstone creek, about 35 miles above Fort Randall, the medicine-men got up a religious craze known as O-pes-ne Wa-che or Bullet Proof dance. This consisted of stripping three braves to “war gear” — the breech-cloth — around whom and the medicine-man the Indians danced for a time, and the stripped warriors were then pronounced “bullet proof.” It is needless to say that the guns were carefully loaded without ball.

BEAR DANCE.

The Sioux, like all the others of these Western tribes, are fond of bear's meat, and must have good stores of the bear's grease laid in to oil their long and glossy locks, as well as the surface of their bodies. And they all like the fine pleasure of a bear hunt, and also a participation in the bear dance, which is given several days in succession previous to their starting out, and in which they all join in a song to the Bear Spirit, which they think holds somewhere an invisible existence, and must be consulted and conciliated before they can enter upon their excursion with any prospect of success. For this grotesque and amusing scene one of the chief medicine-men placed over his body the entire skin of a bear, with a war eagle's quill on his head,

taking the lead in the dance, and looking through the skin which formed a mask that hung over his face. Many others in the dance wore masks on their faces, made of the skin from the bear's head, and all, with the motions of their hands, closely imitated the movements of that animal, some representing its motion as running and others the peculiar attitude and hanging of the paws when it is sitting up on its hind feet and looking out for the approach of an enemy. This grotesque and amusing masquerade oftentimes continued at intervals for several days previous to the starting of a party on the bear hunt, who would scarcely count upon a tolerable prospect of success without a strict adherence to this important and indispensable form.

THE GREEN CORN DANCE.

The green corn is considered quite a luxury by all those tribes who cultivate it; and is ready for eating as soon as the ear is of full size, and the kernels are expanded to their full growth, but are yet soft and pulpy. In this green state of the corn it is boiled and dealt out in great profusion to the whole tribe, who feast and surfeit upon it whilst it lasts; rendering thanks to the Great Spirit for the return of this joyful season, which they do by making sacrifices, by dancing and singing songs of thanksgiving. This joyful occasion is one valued alike, and conducted in a similar manner, by most of the tribes who raise the corn, however remote they may be from each other.

It lasts but for a week or ten days, being limited to the longest term that the corn remains in this tender and palatable state, during which time all hunting, and all war-excursions, and all other avocations are positively dispensed with, and all join in the most excessive indulgence of gluttony and conviviality that can possibly be conceived. The fields of corn are generally pretty well stripped during this excess, and the poor improvident Indian thanks the Great Spirit for the indulgence he has had, and is satisfied to ripen merely the few ears that are necessary for his next

year's planting, without reproaching himself for his wanton lavishness, which has laid waste his fine field, and robbed him of his golden harvest, which might have gladdened his heart, with those of his wife and children, through the cold and dreariness of winter.

The most remarkable of this joyous occasion is the Green Corn Dance, which is always given as preparatory to the feast, and by most of the tribes in the following manner:—

At the usual season, and the time when from outward appearance of the stalks and ears of corn it is supposed to be nearly ready for use, several of the old women who are the owners of fields or patches of corn (for such are the proprietors and cultivators of all crops in Indian countries, the men never turn their hands to such degrading occupations) are delegated by the medicine-men to look at the corn fields every morning at sunrise and bring into the council-house, where the kettle is ready, several ears of corn, the husks of which the women are not allowed to break open or even to peep through. The women then are from day to day discharged and the doctors left to decide, until from repeated examinations they come to the decision that it will do, when they dispatch runners or criers, announcing to every part of the village or tribe that the Great Spirit has been kind to them, and they must all meet on the next day to return thanks to him for his goodness. That all must empty their stomach and prepare for the feast that is approaching.

On the day appointed by the doctors, the villagers are assembled, and in the midst of the group a kettle is hung over the fire and filled with green corn, which is well boiled, to be given to the Great Spirit as a sacrifice necessary to be made before any one can indulge the cravings of his appetite. Whilst this first kettle-full is boiling, four medicine-men, with the stalk of corn in one hand and a rattle in the other, with their bodies painted with white clay, dance around the kettle, chanting a song of thanksgiving to the Great Spirit to

whom the offering is to be made. At the same time a number of warriors are dancing around in a more extended circle, with stalks of corn in their hands, and joining also in the song of thanksgiving, whilst the villagers are all assembled and look on. During this scene there is an arrangement of wooden bowls laid upon the ground, in which the feast is to be dealt out, each one having in it a spoon made of the buffalo or mountain-sheep horn. In this way the dance continues until the doctors decide that the corn is sufficiently boiled ; it then stops for a moment, and again assumes a different form and a different song, whilst the doctors are placing the ears on a little scaffold of little sticks, which they erect immediately over the fire, where it is entirely consumed, as they join in the dance around it.

The fire is then removed, and with it the ashes, which together are buried in the ground, and new fire is originated on the same spot where the old one was, by friction. This is done by a desperate and painful exertion by three men sitting on the ground, facing each other, and violently drilling the end of a stick into a hard block of wood by rolling it between the hands, each one catching it in turn from the others without allowing the motion to stop until smoke, and at last a spark of fire is seen and caught in a piece of punk, when there is great rejoicing in the crowd. With this a fire is kindled, and the kettle of corn again boiled for the feast, at which the chiefs, doctors and warriors are seated ; and after this an unlimited license is given to the whole tribe, who surfeit upon it and indulge in all their favorite amusements and excesses until the fields of corn are exhausted, or its ears have become too hard for their comfortable mastication.

THE BRAVE'S DANCE.

The Brave's Dance is peculiarly beautiful, and exciting to the feelings in the highest degree. At intervals the partakers in this dance stop, and one of them steps into the

ring and vociferates as loud as possible, with the most significant gesticulations, the feats of bravery which he has performed during his life. He boasts of the scalps he has taken, of the enemies he has vanquished, and at the same time carries his body through all the motions and gestures which have been used during these scenes when they were transacted. At the end of his boasting all assent to the truth of his story, and give in their approbation by the guttural "*waugh!*" and the dance again commences. At the next interval, another makes his boasts, and another, and another, and so on.

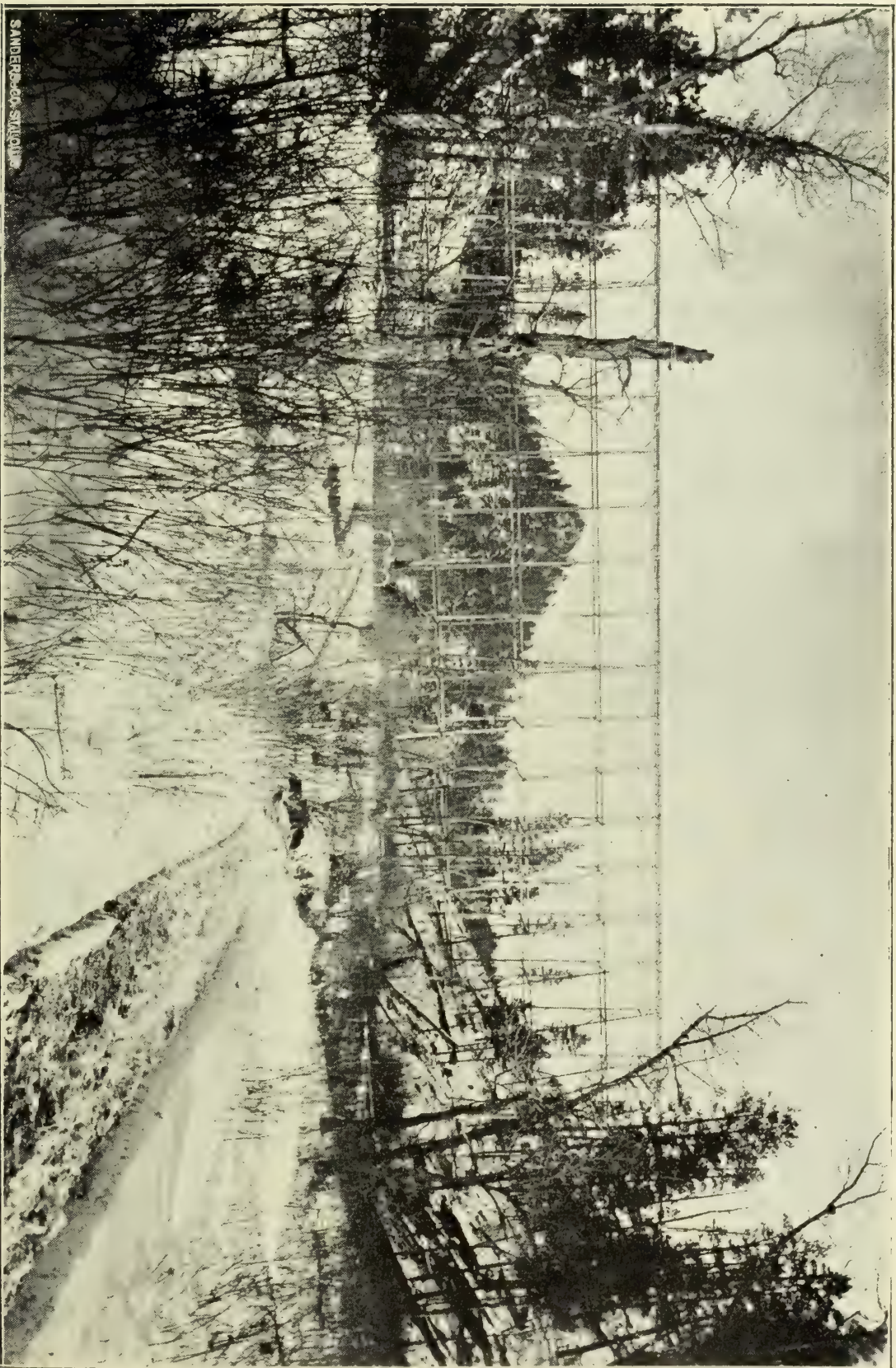
CHAPTER XXIII.

FAMILY LIFE.

A Dakota obtains his wife (or wives) not by courtship, but on forming an engagement, the bridegroom, or, if he be poor, his friends and neighbors, makes a present to the bride's parent, of whom no dowry is expected. The acceptance of the present perfects the contract; the wife is purchased; and for a season at least, the husband, surrendering his gains as a hunter to her family, has a home in her father's lodge.

Though the son-in-law lives near the parents of his wife, he never names or talks to them, and never looks his wife's mother in the face. He thinks it is disrespectful to act in any other manner. He occupies a large lodge, while his wife's parents frequently live in a small one, in the rear; whom he supplies with game until he has a family of his own. Should the parents accidentally meet him, they hide their faces. If the mother starts for the daughter's lodge and perceives her husband inside, she does not enter.

Even in marriage the Indian abhors restraint; polygamy is permitted, though in the North it is not common; and the wilderness could show wigwams where couples have



SANDERCOO STATION

NATURAL SCENERY.

lived together thirty to forty years. Love did not always light his happiest torch at the nuptials of the children of nature, and marriage had for them its sorrows and its crimes.

The infidelity of the husband sometimes drove the helpless wife to suicide. The faithless wife had no protector; her husband might at his will insult or disgrace her or take her life. Divorces took place without formality, a simple separation or desertion, and where there was no offspring it was of easy occurrence. Children were the strongest bond to keep the family united, for if the mother was discarded, it was the unwritten law of the red man that she should retain those whom she had borne.

The squaw loves her children with instinctive passion; and if she does not manifest it by lovely caresses, her tenderness is real, wakeful and constant. No savage mother ever trusted her babe to a hireling nurse; no savage mother puts away her own child to suckle that of another. To a cradle consisting of thin pieces of light wood, and gaily adorned with quills of the porcupine and beads and rattles, the infant is firmly attached, and carefully wrapped in furs, and thus swathed, its back to the mother's back, it is cheerfully borne—its dark eyes now flashing light, now filled with tears as it follows the wailings which the plaintive melodies of the carrier can not hush. Or, while the squaw toils in the field, she hangs her child, as spring does its blossoms, on the boughs of a tree, that it may be rocked by breezes from the land of souls, and soothed to sleep by the lullaby of the birds. Does the mother die, the nursling, such is Indian compassion, shares her grave.

If the infant dies during the time that is allotted to it to be carried in the cradle, it is buried, and the disconsolate mother fills the cradle with black quills and feathers, in the parts which the child's body had occupied, and in this way carries it around with her wherever she goes for a year or more, with as much care as if her infant were alive and in it. She often lays or stands it against the side of her wigwam, where she is all day engaged, and chatting or talking

to it as familiarly and affectionately as if it were her papoose instead of the cradle she was talking to. So lasting and so strong is the affection of these women for the lost child, that it matters not how heavy or cruel their load, or how rugged the route they have to pass over, they will faithfully



CHUICAHUA APACHE.

carry this, and carefully, from day to day, and even more strictly perform their duties to it, than if the child were alive and in it.”

On quitting the cradle, the children are left nearly naked in the lodge, to grow hardy and learn the use of their limbs.

Juvenile sports are the same everywhere; children invent them for themselves; and the traveler, who finds through the wild world the same games, may rightly infer that an innate power instructs childhood in its amusements. There is no domestic government; the young do as they will. They are never earnestly reproved, injured or beaten; a dash of cold water in the face is their heaviest punishment.

If they assist in the labor of the household, it is as a pastime, not as a charge. Yet they show respect to their chiefs and defer with docility to those of their lodge.

The attachment of savages to their offspring is extreme and they can not bear separation from them. As soon as the child can grasp the bow and arrow, they are in his hand; and, as there was joy at the wigwam at his birth, and his first cutting of a tooth, so a festival is kept for his earliest success in the chase.

The Indian youth is educated in the school of nature. The influences by which he is surrounded kindle within him the passion for war; as he grows up he, in his turn, begins the war-song, of which the echoes never die away on the boundless plains of the West till the Indian himself has disappeared.

What appears at first glance to be one of the most revolting and cruel customs of the migratory Sioux tribes, is the exposure of the old and infirm to perish after they have become unable to keep up with the tribe. We are told, however, that necessity compels them to this course; unless they would more humanely, it is true, at once put an end to the lives of such unfortunates. The old sufferers not only assent to the proceedings, but generally suggest it, when conscious that they are too weak to travel, or to be of any further service among their people. With some slight protection over them, and a little food by their side, they are left to die, and be devoured by the wolves.

CHAPTER XXIV.

FUNERALS.

During the long enforced inaction of the winter camp, which the noble red man must get through as best he can in gambling and sleep, the death of some prominent person is almost a matter of rejoicing. All may indulge the luxury of grief; and from the commencement of the elaborate preparation to the final ceremony, the funeral excitement may last for a month. The death of the same person in summer would cause some little excitement, and possibly a day or two might be given to the obsequies, but should he be so unfortunate as to die during the Fall hunt, or while on some important expedition, the body would likely be thrust without ceremony in the first convenient hole in the rocks or prairie.

The favorite burying place of all the plain Indians is a tree. A platform is made in the branches and the body disposed upon it, sometimes in a sitting posture, but generally lying on the back. It is dressed in such articles of civilized clothing as the deceased possessed in life, or as are bestowed by the kindness and piety of friends. His arms, blankets, some cooking utensils, food, matches, etc., whatever may be necessary on the long journey or to enable him to make presentable appearance in the "Happy Hunting Grounds," are placed on the platform with the body. Light branches are bent from side to side like the bows of a wagon, and the whole closely covered with rawhide.

In the absence of trees of sufficient height, four light poles are set in the ground, and the platform constructed on their tops, sometimes only six or eight feet from the ground, scarcely beyond the reach of hungry wolves which sometimes collect about it. The Sioux on the reservation now frequently use the boxes in which stores are sent to them, or, obtaining a few pieces of board, put together a

rude coffin, which with the body is mounted on poles as described.

There is no special burying place even near a camp as permanent as Indians ever make. Each head of a family buries his dead wherever he pleases, so it be at some distance. The vicinity of such a camp is frequently dotted with graves, generally each by itself, though it is by no means unusual to find ten or fifteen graves in a specially favorite tree.



INDIANS MAKING THEIR OFFERINGS TO THE DEAD.

When, after the lapse of years, the scaffolds had fallen, and nothing was left but bleached and mouldering bones, the remains were buried, with the exception of the skulls. These were placed in circles upon the plain, with the face turned inward, each resting upon a bunch of wild sage; and in the center, upon two slight mounds, "medicine poles" were erected, at the foot of which were the heads and horns of a male and a female buffalo. To these new places of deposit, each of which contained perhaps hundreds or more skulls, "do these people," says Catlin, "again resort, to evince their further affection for the

dead, not in groans and lamentations, however, for several years have cured the anguish; but fond affections and endearments are here renewed, and conversations are held and cherished with the dead."

The wife or mother would sit for hours by the side of the white relic of the loved and lost, addressing the skull with the most affectionate and loving tones, or, perchance, lying down and falling asleep with her arms around it. Food would be nightly set before many of these skulls, and, with the most tender care, the aromatic bed upon which they reposed would be renewed as it withered and decayed.

The Sioux seem to attach some special importance to green as a funeral color. In almost all the graves found along the Belle Fourche and examined by the early explorers, the blankets in which the remains were wrapped were green. One of the explorers found that his horse's back had become sore, and that another saddle blanket was absolutely necessary to keep the animal in a serviceable condition. An Indian grave was examined, and the dry bones found to be wrapped in a good green blanket. After some natural hesitation the blanket was appropriated as the Indians' contribution to science. The horse's back improved and all went on swimmingly until the party began to encounter small bodies of Indians, all very friendly and demonstrative in handshaking. Each man of such parties scrutinized narrowly and anxiously, first the green blanket, then the person of the individual riding on the saddle, which covered but did not conceal it.

This occurred so frequently and was so noticeable that the rider became extremely nervous and his conscience so worked upon him, that when he saw at a distance an approaching party of Indians, he immediately found something specially important in another direction. His companions made great sport of the poor fellow's predicament, and gave him the Indian name "Wa-shenar-kokape," which interpreted means "The-man-afraid-of-his-blanket."

In asking several Indians, and those best acquainted

with their customs, what the numerous stone piles signified which are found along the foot-hills, I received the following answer from Mr. Hank Wright ("Our Hank," as the *Deadwood Times* used to call him): "The Sioux, when any of them were killed in battle, away from their main habitation, from home, buried them in shallow graves covered with stones. The bodies were afterwards often taken up and taken home. The graves were filled up with stones and piled up on top. Every Indian afterwards when passing such a pile, whether the body was still there or taken away, would add one stone, and thus in the course of time the piles would become quite large."

Years ago a number of such stone piles were found where now the deep cut of the F. E. & Mo. Valley R. Ry., is between Sturgis and Whitewood. At that point a fierce battle, the last one between the Sioux and Crow, had been waged, the bodies buried but afterwards removed by the Sioux. Smaller piles of stone were used as indicators; the fresh water springs were thus indicated; a piece of meat on the top of the stone would indicate that the party there last had plenty of eatables on hand. A piece of a skin that victuals were scarce; the point of the uppermost stone would indicate the direction taken by the forerunners of a party. Tobacco and other luxuries were a sign of friendly welcome, etc.

CHAPTER XXV.

THE AMOROUS TRAPPER.

"Idleness and ease," says Capt. Booneville, in his "Adventures," "lead to love, and love to matrimony, in civilized life, and the same process takes place in the wilderness." Filled with good cheer and mountain mutton, one of the free trappers began to repine at the solitude of his lodge, and to experience the force of that great law of nature, "it is not good for man to live alone." After a night of grave

cogitation he repaired to Kowsoter, the Pierced-nose chief, and unfolded to him the secret workings of his bosom. "I want," said he, "a wife. Give me one from among your tribe. Not a young giddy-pated girl, that will think of nothing but flaunting and finery, but a sober, discreet,



A TRAPPER'S HOME.

hard-working squaw; one that will share my lot without flinching, however hard it may be; that can take care of my lodge, and be a companion and a helpmate to me in the wilderness."

Kowsoter promised to look around among the females of his tribe, and procure such an one as he desired. Two days

was required for the search. At the expiration of these, Kowsoter called at his lodge, and informed him that he would bring his bride to him in the course of the afternoon. He kept his word; at the appointed time he approached leading the bride, a comely copper-colored dame attired in her Indian finery. Her father, mother, brothers by the half-dozen, and cousins by the score, all followed on to grace the ceremony and greet the new and important relative.

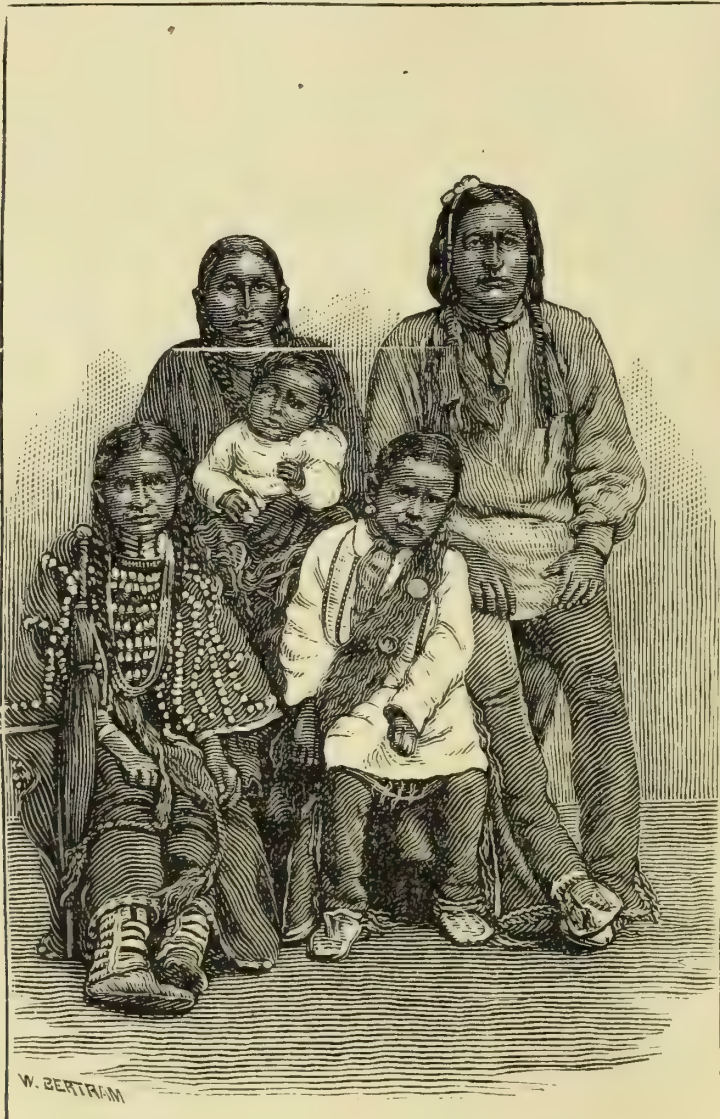
The trapper received his new and numerous family connections with proper solemnity; he placed his bride beside him, and, filling the pipe, the great symbol of peace, with his best tobacco, took two or three whiffs, then handed it to the chief, who transferred it to the father of the bride, from whom it was passed on from hand to hand and mouth to mouth of the whole circle of kinsmen round the fire, all maintaining the most profound and becoming silence. After several pipes had been filled and emptied in this solemn ceremonial, the chief addressed the bride, detailing at considerable length the duties of a wife, which, among Indians, are little less onerous than those of the packhorse; this done, he turned to her friends and congratulated them on the great alliance she had made. They showed a due sense of their good fortune, especially when the nuptial presents came to be distributed among the chiefs and relatives, amounting to about one hundred and eighty dollars. The company soon retired.

Now the worthy trapper found out, indeed, that he had no green girl to deal with; for the knowing dame at once assumed the style and dignity of a trapper's wife; taking possession of the lodge as her undisputed empire, arranging everything according to her own taste and habits, and appearing as much at home and upon as easy terms with the trapper as if they had been man and wife for years.

No sooner does an Indian belle experience the promotion of a free trapper's wife, than all her notions at once rise and expand to the dignity of her situation; and the purse of her lover, and his credit, are tasked to the utmost to fit

her out in becoming style. The wife of a free trapper to be equipped and arrayed like an ordinary and undistinguished squaw? Perish the groveling thought!

In the first place, she must have a horse for her own riding; but no jaded, sorry, earth-spirited hack; such as is sometimes assigned by an Indian husband for the trans-



SMALL WOLF, CHEYENNE CHIEF.

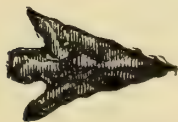
portation of his squaw and her papooses. The wife of a free trapper must have the most beautiful animal she can lay her eyes on. And as to his decoration, head-stall, breast-bands, saddle and crupper, are each lavishly embroidered with beads and hung with thimbles, hawkbells and bunches of ribbons. From each side of the saddle

hangs an esquimoo, a sort of pocket, in which she bestows the residue of her trinkets and knickknacks, which can not be accommodated in the decorations of her horse or herself. Over this she folds, with great care, a drapery of scarlet and bright colored calicoes, and now considers the caparison of her steed complete.

As to her own person, she is still more extravagant. Her hair, esteemed beautiful in proportion to its length, is carefully plaited, and made to fall with seeming negligence over either breast. Her riding hat is stuck full of partly colored feathers; her robe, fashioned somewhat after that of the whites, is of red, green, and sometimes gray cloth, but always of the finest texture that can be procured. Her leggins and moccasins are of the most beautiful and expensive workmanship, and fitted neatly to the foot and ankle, which with the Indian women are generally well formed and delicate.

Then as to jewelry, in the way of finger-rings, ear-rings, necklaces, and other female glory nothing within reach of the trapper's means is omitted that can tend to impress the beholder with an idea of the lady's high station.

To finish the whole she selects from among her blankets of various dyes, one of some glowing color, and throwing it over her shoulders with a native grace, vaults into the saddle of her gay, prancing steed, and is ready to follow her mountaineer to the last gasp with love and loyalty.



BOOK II.

CHAPTER I.

PONCE DE LEON.

When King Solomon had finished the Temple, “Hiram, the King of Tyre, sent his servants in the fleet, sailors that had knowledge of the sea, with the servants of Solomon. And they come to Ophir and they brought from thence to King Solomon four hundred and twenty talents of gold.” — *3Kings 9: 27, 28.*

From that day searchers for gold tried to find out this land rich in “gold and precious stones.” As it took the united fleets of Solomon and Hiram three years to make the round trip, the country must naturally be at a distance. Some placed Ophir and Sapora in Western Africa, others in Eastern Asia, others again on some unknown island in an unknown ocean. The obscure allusions of Aristotle, Plato and Seneca to a country hid in the Western Ocean derive fresh importance from the discovery of the Canary Islands, Madeira and the Azores in the early part of the Fifteenth Century. Columbus himself was persuaded, that Ophir, the Eldorado of Solomon, and Mount Sapora were portions of Eastern Asia,—the Chersoneses Aurea of Ptolemy. In one of his letters dated Jamaica, 1503, he expresses his hope of reaching Ophir, and says: “The excellence and power of the gold of Ophir can not be described; he who possesses it, does what he will.”

The great object held out by Columbus in his undertakings was the propagation of the Catholic faith, and the conversion of the Indians, a work dear to his heart. Having returned from his first voyage, the discoverer of the New World brought six Indians to the Court at Barcelona. After the necessary instruction they were baptized with

great ceremony, Queen Isabella with a holy joy performing the office of godmother for them. To the last day of her life, she took a maternal interest in the welfare and happiness of all the natives. "She ordered," says Washington Irving, "that great care should be taken of the religious instructions of the Indians, that they should be treated with the utmost kindness, and enjoined Columbus to inflict signal punishment on all Spaniards who should be guilty of outrage or injustice toward them." On his second voyage Columbus was accompanied by Father Bernhard Boile, from the Benedictine Monastery of Our Lady of Montserat, and twelve priests of his own choice. They commenced the work of religion by consecrating a chapel at Isabella in Hayti, on the Feast of the Epiphany of our Lord in the year 1494. But the great undertakings of Columbus were necessarily very expensive. In the contract made on the 17th of April, 1492, at Santa Fe in the Vega of Granada, King Ferdinand and Queen Isabella granted him "to have a share amounting to a tenth part of the profits of all merchandise — be it pearls, jewels, gold, silver, or any other thing — that may be found, gained, bought or exported from the countries which he is to discover."

Every ship from the New World came freighted with marvels, which convinced the Spaniards of that day, that America was a region of wonder and mystery, of vague and magnificent promise. Thither adventurers hastened thirsting for glory and for gold. They roamed over land and sea; they climbed unknown mountains, surveyed unknown oceans, pierced the sultry intricacies of the tropical forests; while from year to year and from day to day new wonders were unfolded, new islands and archipelagoes, new regions of gold and pearl and barbaric empires of more than Oriental wealth. The extravagance of hope and the power of adventure knew no bounds. Nor is it surprising, that amid such waking marvels the imagination should run wild in romantic dreams; that between the possible and the impossible the line of distinction should be but faintly drawn and that men should be found ready

to stake life and honor in pursuit of the most insane fantasies.

Such a man was the veteran cavalier Juan Ponce de Leon. He had accompanied Columbus on his second voyage and in the wars of Hispaniola had proved himself a gallant soldier. Ovando, the governor of Hispaniola, rewarded him with superintendence of the eastern provinces of that island. From the hills in his jurisdiction he could behold



ADVANCE OF CIVILIZATION.

Porto Rico. A visit to the island stimulated his cupidity, and in 1509 he obtained the appointment to its government. But this commission conflicted with the claims of the family of Columbus and it was revoked.

Greedy of honor and riches he embarked at Porto Rico with three brigantines, bent on schemes of discovery. But that which gave the chief stimulus to his enterprise was a story current among the Indians of Cuba and Hispaniola,

that on the island of Rimini, said to be one of the Bahamas, there was a fountain of such virtue, that, bathing in its waters, old men resumed their youth. It was said moreover, that on a neighboring shore might be found a river, gifted with the same beneficent property and believed by some to be no other than the river Jordan.

On the 3d of March, 1513, according to our present rule for beginning the year, Ponce embarked at Porto Rico with a squadron of three ships, fitted out at his own expense, for his voyage to the fabled land. He touched at Guanahini; he sailed among the Bahamas. On Easter Sunday, which the Spaniards call Pasca Florida, and which in that year fell on the 27th of March, land was seen. It was supposed to be an island, and received the name of Florida, from the day on which it was descried, and from the aspect of the forests, which at that season were very brilliant with bloom. After delay from bad weather the aged soldier was able to go on shore in the latitude of thirty degrees and eight minutes, and at a place called the Bay of the Cross took formal possession, and planted a stone cross in sign of the jurisdiction of Spain.

Ponce remained for many weeks to investigate the coast. He doubled Cape Florida, he sailed among the group of islands which he named the Tortugas, and despairing of entire success he returned to Porto Rico, leaving a trusty follower to continue the search, which was extended toward the bay of Apalacha.

The Indians had everywhere displayed determined hostility. Ponce de Leon remained an old man; he had not regained his youth, but his active spirit was unsubdued, and Spanish commerce acquired a new channel through the Gulf of Florida and New Spain, which imagination could esteem immensely rich, since its interior was unknown.

The claim of Spain comprehended all the country from the Atlantic on the East to the Rocky Mountains in the West; from the Gulf of Mexico and the river Palmas indefinitely northward towards the Polar Sea. This vast territory was claimed by Spain by right of the dis-

coveries of her subjects and the celebrated grant of Pope Alexander VI.

This Pope was appealed to to settle the right of jurisdiction between the Crowns of Portugal and Spain over the countries to be discovered in the New World, and on May 4th, 1493, he issued his "Bula sobre la particion del oceano," the line of demarkation between the Spanish and Portuguese possessions at a distance of one hundred miles to the west of the Azores. The former to have all the land and seas east of that line and the latter those west thereof.

The government of this vast unknown region was the reward which Ponce received from the king of Spain. But the dignity was accompanied with the onerous condition, that he should colonize the country. He was to have exclusive right to the land, settle it at his own cost, and be called Adelantado of Rimini, but the king was to build and hold posts there and agents to divide the Indians among the settlers and receive first a tenth, afterwards a fifth, of the gold and all valuables obtained from the country.

For seven years he was delayed, and when in 1521 he proceeded with two ships to select a site for a colony, his company was attacked by the Indians with implacable fury. Many Spaniards were killed; the survivors were forced to hurry to their ships; Ponce de Leon himself, wounded by an arrow, returned to Cuba to die. So ended the first adventurer who laid claim to a country including the Black Hills. He had gone in quest of innumerable wealth and perpetual youth, but found neither.

CHAPTER II.

PAMPHILO DE NARVAEZ.

On March the 3d, 1520, the emissaries of Hernando Cortez, the conqueror of Mexico, presented themselves at Fordesillas, before Charles V, Emperor of Germany and

King of Spain. The treasures of Axayacatl taken from Montezuma, King of Mexico, by Cortez were brought into court.



HERNANDO CORTES.

Besides numerous other valuables the treasure contained : A basket full of gold and silver ornaments. A Spanish helmet filled to the brim with grains of gold. Two circular plates of gold and silver, as large as carriage wheels, one

representing the sun was richly carved with plants and animals; it was valued at twenty thousand pesos de oro, equal to \$223,400; the silver wheel was of the same size. Two collars made of gold and precious stones. One hundred ounces of gold ore — that their majesties might see in what state the gold comes from the mine. Two birds made of green feathers, with feet, beak and eyes of gold, and in the same piece with them animals made of gold resembling snails. A large alligator head of gold. A bird of green feathers, with feet, beak and eyes of gold. Two birds made of thread and featherwork having the quills of their wings and tails, their feet and eyes and their beaks of gold — standing upon two reeds covered with gold, which are raised on balls of featherwork and gold embroidery, one white, the other yellow, with seven tassels of featherwork hanging from each of them. A large silver wheel weighing forty-eight marks. Several bracelets and leaves of the same metal, together with five smaller shields, the whole weighing sixty-two marks of silver. A box of featherwork embroidered on leather, with a large plate of gold, weighing twenty-seven ounces, in the middle. A large wheel of gold with figures of strange animals on it and worked with tufts of leaves weighing three thousand and eight hundred ounces. A fan of variegated featherwork with thirty-seven rods plated with gold. Fine fans of variegated feathers — four of which had ten and the other thirteen rods embossed with gold. Sixteen shields covered with precious stones. Six shields each covered with a plate of gold. Large quantities of gold and silver plate.

In addition to these there were ornaments of jewelry and gold in the rough stated to amount to six millions three hundred thousand dollars.

The Receiver-General of the Mexican kings had a map of the empire and the countries who paid tribute. A copy of this map was exhibited to the king, queen and the courtiers. They gazed with astonishment at the large masses of the precious metal and the delicate manufacture of the various articles. And as they listened to the

accounts, written and oral, of the countries whence these riches came, they felt assured, that the Castilian ships had at length reached the golden Indies.

The fame of Cortez' exploit rang through all Spain. Many an impatient cavalier burned to achieve kindred fortune. To the excited fancy of the Spaniards the unknown land of Florida seemed the seat of surpassing wealth, and Pamphilo de Narvaez essayed to possess himself of its fancied treasures. He obtained from Charles V, the contract to explore and reduce all the territory from the Atlantic to the river Palmas, and the title of Adelantado. Narvaez was both rich and covetous, hazarded all his treasure on the conquest of his province, and sons of Spanish nobles and men of good condition flocked to his standard.

In order to convert the natives the expedition was attended by the Right Rev. John Juarez, who was appointed by the Holy See, Bishop of Florida, thus being the first Bishop, who had jurisdiction over the present territory covered by the United States.

In June, 1527, his expedition, in which Alvar Nunez Cabeza de Vaca held the second place as treasurer, left the Guadalquivir, touched on the island of San Domingo, and during the following winter, amid storms and losses, passed from port to port on the southern side of Cuba, where the experienced Mirnelo was engaged as pilot. In the spring of 1528 he doubled Cape San Antonio and was standing in for Havana, when a strong south wind drove his fleet upon the American coast, and on the 14th of April, the day before Good Friday, he anchored in or near the bay of St. Louis, now Tampa Bay.

On the day before Easter the Governor landed, and in the name of Spain took possession of Florida. The natives kept aloof, or if they drew near, marked by signs their impatience for his departure. But they had shown him samples of gold, which, if their gestures were right, came from the North. Disregarding the most earnest advice of Alvar Nunez Cabeza de Vaca, he directed the

ship to meet him at a harbor with which the pilot pretended acquaintance, and on the first of May, mustering three hundred men, of whom forty were mounted, he struck into the interior of the country.

The wanderers as they passed along gazed on trees astonishingly high, some riven from the top by lightning; the pine, the cypress, the sweet gum, the slender, gracefully tall palmetto, the humbler herbaceous palm with its droplet of crenated leaves; the majestic magnolia, glittering in the light, live oaks of such growth that when they are vanishing under the axe, men hardly believe the tales of their greatness, multitudes of birds of untold varieties, and quadrupeds of many kinds, among them the opossum, wondered at for its pocket to house and carry its young; the bear, more than one kind of deer, the panther, which was mistaken for the lion; — but they found no rich town, nor a high hill, nor gold.

When on rafts, and by swimming, they had painfully crossed the Withlochoochee, they were so worn by famine as to give infinite thanks to God for lighting upon a field of unripe maize.

Just after the middle of June they encountered the Suwanee whose wide, deep and rapid stream delayed them till they could build a large canoe. Wading through swamps, made more terrible through trunks of fallen trees that lay rotting in the water, but sheltered the few but skillful native archers, on the day after St. John's they approached Appalachee, where they had pictured to themselves a populous town and food and treasure, and found only a hamlet of forty wretched cabins. Here they remained for five and twenty days scouring the country round in quest of silver and gold, till perishing with hunger and weakened by fierce attacks, they abandoned all hope but of an escape from a region so remote and malign.

Amid increasing dangers they went onward through deep lagoons and thick forests in search of the sea, till in August they came upon a bay, which they called Baia de Caballos, and which now forms the harbor of St. Mark's.

No trace could be found of their ships; sustaining life by the flesh of their horses, and by six or seven hundred bushels of maize, plundered from the Indians, they beat their stirrups, crossbows and other implements of iron into saws, axes and nails, and in sixteen days finished five boats, each of twenty-two cubits or more than thirty feet in length. In caulking their frail craft, films of the palmetto served for oakum, and they paved the seams with pitch from the nearest pines. For rigging they twisted ropes out of horse-hair and the fibrous bark of the palmetto; their shirts were pieced together for sails, and oars were shaped out of saplings; skins flayed from horses served for water-bottles. It was difficult in the deep sand to find large stones for anchors and ballast.

Thus equipped, on the 22d of September, about two hundred and fifty men, all of the party whom famine, autumnal fevers, fatigue and the arrow of the savage bowman had spared, embarked for the river Palmas. Former navigators had traced the outline of the coast, but among the voyagers there was not a single expert mariner. One shallop was commanded by Alonzo de Castillo and Andres Dorantes, another by Cabeza de Vaca. The gun-wales of the crowded vessels were but a hand's breadth above the water.

After creeping for seven days through shallow sounds, Cabeza seized five canoes of the natives, out of which the Spaniards made guardboards for their five boats. For thirty days more they kept on their way, suffering from hunger and thirst, imperiled by storms, now closely following the shore, and now avoiding savage enemies by venturing upon the sea.

While crossing Mobile Bay the Bishop and his companions were nearly drowned, being saved by the skill and bravery of Narvaez. On the 30th of October at the hour of vespers, Cabeza de Vaca, who happened to lead the van, discovered the mouth of the river now known as the Mississippi, and the little fleet was snugly moored among the islands at a league from the stream, which brought down

such a flood, that even at that distance the water was sweet. They would have entered the "very great river" in search of fuel to parch their corn but were baffled by the force of the current and a rising north wind.

A mile and a half from the land they sounded and with a line of thirty fathoms could find no bottom. In the night following a second day's fruitless struggle to go up the stream the boats were separated, but the next afternoon Cabeza overtaking and passing Narvaez, who chose to hug the land, struck boldly out to sea in the wake of Castillo, whom he descried ahead. They had no longer an adverse current as in that region the prevailing wind is from the east. For four days the half-famished adventurers kept prosperously towards the west, borne along by their rude sails and their labors on the oars.

All the 5th of November an easterly storm drove them forward, and on the morning of the 6th the boat of Cabeza was thrown by the surf on the sands of an island which he called the Isle of Malhado — that is, of Misfortune. The Indians expressed sympathy for their shipwreck by howls, and gave them food and shelter. Here Father Asturiana, who, with Bishop Juarez and Brother John de Palos, was among the survivors, died.

Castillo was cast away a little farther to the east, but he and his company were saved alive. Of the other boats an uncertain account reached Cabeza, that one foundered in the Gulf, that the crews of the other two gained the shore, that Navarez was afterwards driven out to sea, that the stranded men began wandering towards the west, and that all but one perished from hunger.

Bishop Juarez and Brother John de Palos were last seen together. The time and manner of the Bishop's death are unknown. Brother John de Palos died in Mexico, where his short career was one of zeal in learning the language of the people and instructing them.

Those who were with Cabeza and Castillo gradually wasted away from cold, want and despair, but Cabeza, Dorantes, Castillo and Estevanico, a blackmoor from Bar-

bary, bore up against every ill, and though scattered among various tribes, took thought for each other's welfare.

The brave Cabeza de Vaca, as self-possessed a hero as ever graced a fiction, fruitful in resources and never wasting time in complaint of fate or fortune, studied the habits and the language of the Indians, accustomed himself to their mode of life, peddled little articles of commerce from tribe to tribe in the interior and along the coast for forty or fifty leagues, and won fame in the wilderness as a medicine-man of wonderful gifts.

In September, 1534, after nearly six years of captivity, the great forerunner among the pathfinders across the continent, inspired the three others with his own marvelous fortitude, and naked and ignorant of the way, without as much as a single bit of iron, they planned their escape.

Cabeza has left an artless account of his recollections of the journey, but his memory sometimes called up incidents out of their place, so that his narrative is confused. He pointed his course far inland, partly because the natives away from the sea were more numerous and more wild, and partly that if he should again come among Christians he might describe the country and its inhabitants.

Continuing his pilgrimage for more than twenty months, sheltered from cold first by deerskins, then by buffalo robes, he and his companions passed through Texas as far north as the Canadian River, then, choosing Indian paths, crossed the watershed to the valley of the Rio Grande del Norte, and borne up by cheerful courage against hunger, want of water on the plains, cold and weariness, perils from beasts and perils from red men, the voyagers went from town to town in New Mexico westward and still to the west, till in May, 1536, they drew near the Pacific Ocean at the village of San Miguel, in Sonora. From that place they were escorted by Spanish soldiers to Compostelle, and all the way to the City of Mexico they were entertained as public guests. They gave a glowing account of the rich and powerful kingdoms which they had seen in the interior.

In 1537, Cabeza de Vaca, landing in Spain, addressed to the Imperial Catholic King a narrative of his adventures, and the tales of "the Columbus of the Continent," quickened the belief that the country between the river Palmas and the Atlantic was the richest in the world. It had been believed that the recesses of the continent at the north concealed cities as magnificent, and temples as richly endowed, as any which had yet been plundered within the tropics.

CHAPTER III.

DE SOTO.

Hernando de Soto had been the companion of Pizarro in the conquest of Peru. He had come to America a needy adventurer with no other fortune than his sword and target. But his exploits had given him fame and fortune and he appeared at court with the retinue of a nobleman. Still his active energies could not endure repose, and his avarice and ambition goaded him to fresh enterprises. De Soto desired to rival Cortez in glory and surpass Pizarro in wealth. Blinded by avarice and the love of power he repaired to Valladolid, and begged permission to conquer Florida at his own cost. Charles V readily conceded to so renowned a commander the government of Cuba, with absolute power over the immense territory to which the name of Florida was still vaguely applied. No sooner was the design of the new armament published in Spain than the wildest hopes were indulged. How brilliant must be the prospect, since the conqueror of Peru was willing to hazard his fortune and the greatness of his name!

Adventurers assembled as volunteers, many of them people of noble birth and good estates. Houses and vineyards, land for tillage, and rows of olive trees in the Ajarrafe of Savilla, were sold, as in the times of the Crusades, to obtain the means of military equipments. A

number of priests, both secular and religious, accompanied the expedition; among them were Father Dennis, a Parisian, Diego de Bannelos of Cordova, Francis de la Rocha, a Trinitarian religious, Roderic de Gallegos, Francis de Pozo, John de Torres, John de Galligos and Louis de Soto.

The port of San Lucas de Barrameda was crowded with those who hastened to solicit permission to share in the undertaking. Even soldiers of Portugal desired to be enrolled for the service. A muster was held; the Portuguese glittered in burnished armor and the Castilians were "very gallant with silk upon silk." From the numerous aspirants De Soto selected for his companions six hundred men in the bloom of life, the flower of the Peninsula.

The fleet sailed as gaily as if on a holiday excursion. From Cuba the precaution had been taken to send vessels to Florida to explore a harbor; and two Indians, brought captives to Havanna, invented such falsehoods as they perceived would be acceptable. They conversed by signs; and the signs were interpreted as affirming that Florida abounded in gold. The news spread great contentment; De Soto and his troops restlessly longed for the hour of their departure to the conquest of "the richest country which had yet been discovered." The infection spread in Cuba, and Vasco Porcallo, an aged and wealthy man, lavished his fortune in magnificent preparations.

De Soto had been detained in Cuba by long and brilliant festivals and rejoicings. In May, 1539, all preparations were completed; leaving his wife to govern the island he and his company, full of unbounded expectations, sailed for Florida; and in about a fortnight his fleet anchored in the bay of Spiritu Santo. The soldiers went on shore; the horses, between two and three hundred in number, were disembarked. Soto would listen to no augury but success, and like Cortez, he refused to retain his ships least they should tempt a retreat. Most of them were sent to Havanna. Porcalla grew alarmed. It had been a principal object for him to obtain slaves for his estates and

mines in Cuba. Despairing of success, he sailed for the island after the first skirmish; Soto was indignant at the desertion, but concealed his anger.

And now began the nomadic march of horsemen and infantry completely armed, a force exceeding in numbers and equipments the famous partisans who triumphed over the empires of Mexico and Peru. Everything was provided that experience in former invasions could suggest. It was a roving company of gallant freebooters in quest of a fortune; a romantic stroll of men whom avarice rendered ferocious, through unexplored regions, over unknown paths, wherever rumor might point to some chieftain with more than Peruvian wealth or the ill-interpreted signs of the ignorant natives might seem to promise gold.

The twelve priests, besides other ecclesiastics, not only did all in their power to convert, civilize and protect the red man, but also observed every religious practice. Ornaments for Mass were carried along, every festival was kept, and as the troops marched through the wilderness, the solemn procession, which the Church enjoined, were scrupulously instituted. Florida was to become Catholic.

The story of this march has often been told. For month after month, for year after year, they wandered on through wild and boundless wastes, lured hither and thither by the *ignus fatuus* of their hopes. They traversed great portions of Georgia, Alabama and Mississippi; everywhere inflicting, and everywhere enduring misery, but never approaching their phantom El Dorado.

At length in the third year of their journeying they reached the banks of the Mississippi, a hundred and thirty-two years before its second discovery by Marquette. They crossed over at a point above the mouth of the Arkansas. They advanced westward, but found no treasures, nothing indeed but hardships and Indian enemies, "furious," writes one of their officers, "as mad dogs."

Dakota tribes then occupied the country southwest of the Missouri; Soto had heard its praises; he believed it in vicinity to mineral wealth and determined to visit its towns.



DE SOTO ON THE SHORE OF THE MISSISSIPPI.

The party sent to examine the region reported that they were almost a desert. The country nearer the Missouri was said by the Indians to be thinly inhabited; the bison or buffalo abounded there so much, that no maize could be cultivated and the few inhabitants were hunters.

In August, Soto turned therefore to the west and northwest and plunged still more deeply into the interior of the continent. The mountains offered neither gems nor gold, and the disappointed explorers marched to the south. In the middle of April, 1542, he arrived at the province, where the Washita, already united with the Red River, enters the Mississippi. He was attacked by a malignant fever and, believing his death near at hand, on the 20th of May, he held a last interview with his followers, and yielding to the wishes of his companions, who obeyed him to the end, he named a successor. On the next day he died. His soldiers pronounced his eulogy by grieving for their loss; the priests chanted over his body the first requiems that were ever heard on the waters of the Mississippi. To conceal his death his body was wrapped in a mantle and in the stillness of midnight was sunk to the middle of the stream.

CHAPTER IV.

CORONADO'S EXPEDITION.

The map which was taken from the Receiver-General of Montezuma, the King of Mexico, designated Cibola as the country whence the tribute of gold was received. In 1530, an Indian slave named Tezon, a native of New Galicia, told the governor of that province wonders of the seven cities of Cibola, "the land of the buffalo," that lay at the north, between the oceans and beyond the desert, and abounded in silver and gold. He stated that each city was as large as Mexico, that the country abounded in precious metals; that entire streets in these cities were occupied by gold-

smiths; that his father had been a trader in ornamental feathers in those cities and had brought in exchange for his goods large quantities of gold and silver. This was the germ of the long prevailing myth of the seven cities of Cibola.

It would carry us too far back to speak in detail of the various expeditions sent from Mexico to Cibola. Nuno de Guzman was the first to start, but he never reached it, and after countless difficulties he founded the kingdom of New Galicia, establishing the seat of his government at Kalisco and Tolona. After eight years he was deposed by the Viceroy, Don Antonio de Mendoza, and thrown into prison. Subsequently Francesco Vasquez Coronado, a gentleman from Salamanca, in Spain, but for some time established in Mexico, was appointed Governor of New Galicia.

Shortly after this, the four pioneers who had survived from the unfortunate expedition of Narvaez arrived. They were, Cabeza de Vaca; Dorantes, Castillo and Estevanico or Stephan, a negro. Coronado listened with great interest to the account of their travel. In consequence he sent the Italian, Marc of Nice, a Franciscan Friar, with Stephan as a guide, to reconnoitre the country. With one companion, Father Honoratus, he set out from Culican, March the 7th, 1539; but the latter becoming too ill to proceed, Mark left him at Petatlan and, with his guide and some friendly Indians, struck boldly into the desert that stretches away to Gila, and finally crossing that deeply imbedded river, recommenced his toilsome march for Cibola, the Zuni of the natives. Wandering amid tribes dressed in bison skins and cotton mantles, purchased from the more civilized Cibolans, his hopes were high, and naming the vast realm San Francisco, he always beheld it in imagination converted to the faith and become the home of his missionary order. The kingdom of San Francisco lives but in his narrative; yet, as if to realize his wish, a city of that name is the Carthage of the Pacific.

Halting himself as he approached Cibola, he sent on his guide and a number of Indians to prepare the way; but the

Zunis refused to admit them, and irritated at the pertinacity of Stephen, the negro guide, attacked them and killed several of the party, among the rest Stephen himself. Undeterred by this loss or by the threats of his Indian companions, who would have visited on him the death of their comrades, Father Mark proceeded to a hill which commanded the well-built city of Cibola, and planting a cross, emblem alike of his zeal and the traverse it had sustained, he turned dejectedly to the South.

On the 22nd of the following September, Mark was again at Mexico, where he boasted that he had been as far as Cibola, though he had not dared to enter within its walls; that with its terraced stone houses of many stories, it was larger and richer than Mexico; and that his Indian guides gave him accounts of still more opulent towns. The Spaniards in New Spain trusting implicitly in the truth, burned to subdue the vaunted provinces.

The wise and prudent Corondo, parting from his lovely young wife and vast possessions, took command of the explorers; more young men of the proudest families in Spain rallied under his banner than had ever acted together in America; and the Viceroy himself sending Pedro de Alarcon up the coast with two ships and a tender to aid the land party, early in 1540 went in person to Compostella to review the expedition before its departure, to distinguish the officers by his cheering attention and to make the troops swear on a mineral to maintain implicit obedience and never to abandon their chief. The army of three hundred Spaniards, part of whom were mounted, beginning its march with flying colors and boundless expectations, which the more trusty information, collected by Melchior Diaz, could not repress, was escorted by the Viceroy for two days on its way. Father Mark and a number of Franciscans accompanied the expedition.

Never had so chivalrous adventurers gone forth to hunt the wilderness for kingdoms; every one of its officers seemed fitted to lead whenever danger threatened or hope allured. From Culiacan, the General accompanied by fifty

horsemen, a few foot soldiers and his nearest friends, went in advance to Sonora and to the North.

The movements of the General and his companions were rapid and daring. Disappointment first awaited them at Chichilli-Calli, the village on the border of the desert, which was found to consist of one solitary house, built of red earth, without a roof, and in ruins. Having in fifteen days toiled through the barren waste, they came upon a rivulet, which from the reddish color of its turbid waters, they named Vermillion; and the next morning, about the 11th of May, they reached the town of Cibola, which the natives called Zuni. A single glance at the little village, built upon a rocky table, that rose precipitously over the sandy soil, revealed the poverty of the place.

They found there provisions, which were much wanted, but neither gold, nor precious stones, nor rich stuffs.

The anticipations raised by Father Mark were not realized and so great was the indignation raised against him, that he went back to Spain with the first messengers to the Viceroy.

As the other cities of Cibola were scarcely more considerable than Zuni, Coronado dispatched Pedro de Tobar with a party of horsemen to visit the province of Tusayan; that is, the seven towns of Mogui; and he soon returned with the account, that they were feeble villages of poor Indians, who sought peace by presents of skins, mantles of cotton, and maize.

On his return, Garci Lopez de Cordenas with twelve others was sent on the bolder enterprise of exploring the course of the river. It was the season of summer as they passed the Mogui villages, struck across the desert and, winding for twenty days through volcanic ruins and arid wastes, dotted only with dwarf pines, reached an upland plain through which the waters of the Colorado had cleft an abyss for their course. As they gazed down its interminable side they computed it to outmeasure the loftiest mountain, the broad surging torrent below appeared not more than a fathom wide. Two men attempted to descend

into the terrible chasm, but after toiling through a third of the way, they climbed back saying that a block which from the summit seemed no larger than a man, was higher than the tower of the Cathedral of Sevilla. The party in returning to Zuni saw where the little Colorado at two leaps clears a vertical wall of a hundred and twenty feet. Thus far the streams found by the Spaniards flowed to the Gulf of California.

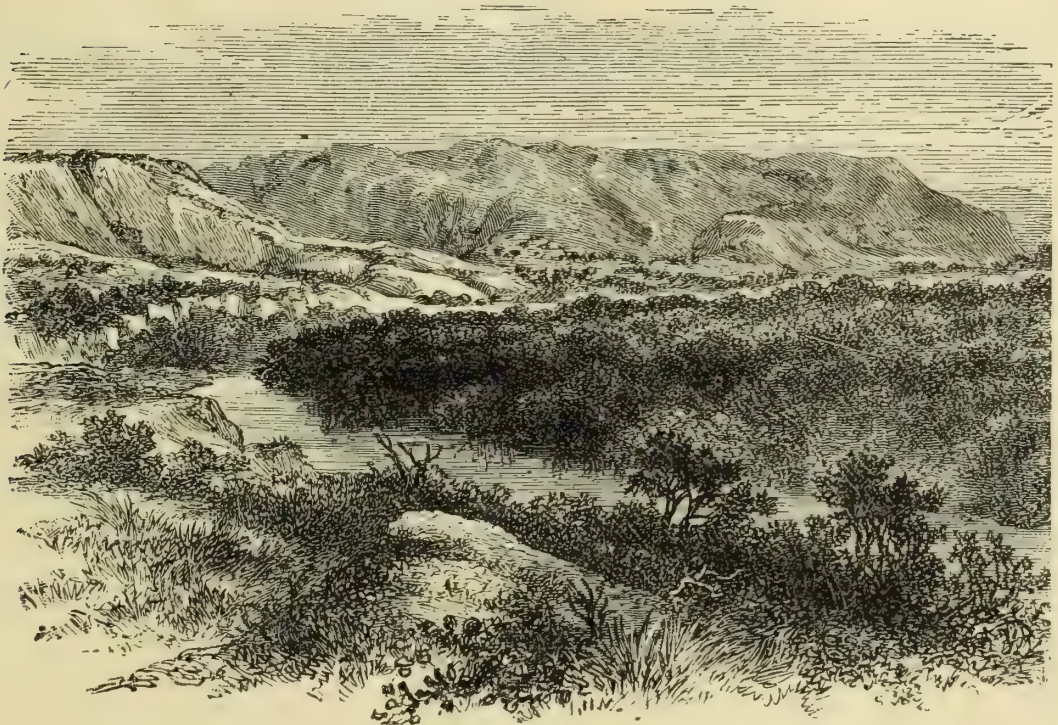
In the summer of 1540, before the return of Cordenas, Indians appeared at Zuni from a province called Cienye, seventy leagues to the east, in a country of cattle whose hair was soft and curling like wool. A party under Fernando Alvarado went with the returning Indians. In five days they reached Nevina, which was built on a high cliff, to be reached only by steps cut in the rock, having on its top land enough to grow maize, and cisterns to catch the rain water and snow. Here the Spaniards received gifts of game, deerskins, bread and maize.

Three other days brought Alvarado to Tignez, in the valley of the Rio del Norte just below Albuquerque, perhaps not far from Isletta, and in five days more he reached Cienye on the river Pecos. But he found there nothing of note except an Indian who told of Omivira, a country to the northeast, the real land of the buffalo, abounding in gold and silver and watered by tributaries of a river which was two leagues wide.

The Spanish camp for the winter was established near Tignez; there Alvarado brought the Indian who professed to know the way to Omiviro; there Coronado himself appeared after a tour of eight more villages, and there his army, which had reached Zuni without loss, arrived in December, suffering on its march from cold, storms and snow.

The people who had thus far been discovered, had a civilization intermediate between that of the Mexicans and that of the tribes of hunters. They dwelt in fixed places of abode, built, for security against roving hordes of savages, on tables of land that spread out upon steep

natural castles of sandstone. Each house was large enough to contain three or four hundred persons and consisted of one compact parallelogram, raised of mud, hardened in the sun, or of stones cemented by a mixture of ashes, earth and charcoal for lime, usually three or four stories high, with terraces, summer balconies and a court, having no entrance on the ground floor, accessible from without only by ladders, which in case of alarm might be drawn inside. There was no king or chief exercising supreme authority,



HOME OF THE PRAIRIE DOG.

no caste of nobles or priest, no human sacrifices, no cruel rites of superstition, no serfs or class of laborers or slaves.

They were not governed much and that little government was in the hands of old men. A subterranean heated room was the council chamber. They had no hieroglyphics like the Mexicans, nor calendar nor astronomical knowledge. Bows and arrows, clubs and stones were their weapons of defense; they were not sanguinary and they never feasted on their captives. Their women were chaste and modest, adultery was rare, polygamy unknown. Maize, beans and pumpkins, it would seem a species of native cotton was

cultivated, the mesquite-tree furnished bread. The dress was of skins or cotton mantles. They possessed nothing which could gratify avarice, the promised torquoises were valueless blue stones.

Unwilling to give up the hope of discovering an opulent country, on the 23d of April, 1541, Coronado, with the false Indian as the pilot of his detachment, began a march to the northeast. Crossing the track of Cabeza de Vaca in the valley of the Canadian river, they came in nine days upon plains which seemed to have no end, and where countless prairie dogs peered on them from their burrows. Many pools of water were found impregnated with salt and bitter to the taste.

The wanderings of the General, extending over three hundred leagues or about one thousand miles, brought him among the Omerhas, hunters of the bison, which gave them food and clothing, strings to their bows and coverings to their lodges. They had dogs to carry their tents when they moved, they knew no wealth but the product of the chase, and they migrated with the wild herds.

The Spaniards came once upon a prairie, that was broken by neither rock or hills, nor trees nor shrubs, nor anything which could arrest the eye as it followed the sea of grass to the horizon. In the hollow ravines there were trees, which could be seen only by approaching the steep bank; the path for descending to the water was marked by the tracks of the bison.

The General, sending back most of his men, with a chosen band journeyed on for forty-two days longer, having no food but the meat of buffaloes and no fuel but their chips. At last he reached the province, which apparently from some confusion of names, he was led to call Omivira and which lay in forty degrees north latitude, unless he may have erred one or two degrees in his observations. It was well watered by brooks and rivers, which flowed to what the Spaniards called the Espiritu Santo; the soil was of the best, a strong black mould, and bore plums like those of Spain, nuts, grapes, and excellent mulberries.

The inhabitants were savage, having no culture but of maize, no lodges but of straw or of bison skins, no clothing but buffalo robes. Here on a bank of a great tributary of the Mississippi, a cross was raised with this incscription: "Thus far came the General, Francisco Vasquez de Coronado."

Won by the manners of these Indians, two of the Franciscan missionaries begged to remain. One of these, Father John de Padille, a native of Andalusia, had once borne arms in the guise of a soldier, and now in the cause of Christ showed no less intrepidity, and determined to begin a mission at the large town of Omivira. The other, a lay brother, John of the Cross, whom men in other days had called Louis de Escalonna, with equal determination resolved to begin his labors in the neighborhood. Coronado, yielding to their zeal, granted their request, and as he had brought live stock in order to settle in the country, a portion was allotted to each missionary, and some Mexican Indians remained as guides and assistants.

Here Padillo for some time labored assiduously, but as it would seem, almost in vain. Hearing of a tribe more docile in character he set out for their town, but when on the road he was suddenly surrounded by a considerable force of roving Indians. Conscious of danger, he urged his companions to fly, and kneeling down prepared to die. In a few moments he fell, pierced by a shower of arrows, and thus sealed his mission with his blood.

Of Brother John of the Cross and his mission no tidings were ever obtained, and he too in all probability fell a victim to the violence of the natives.

How heroic their sacrifice, who, to regenerate and elevate a fallen and debased race, left themselves entirely at the mercy of the savages, renouncing the comfort, security and honors of civilization for the wants and dangers of a mission life!

CHAPTER V.

SPANISH MISSIONARIES CONTINUED.

In January, 1570, the following letter, written by Pope Pius V, was received at the headquarters of the Spanish government in America:—

“ To our Beloved Son and Noble Lord, Pedro Melendez de Avites, Viceroy in the Province of Florida in the Parts of India :

BELOVED SON AND NOBLE SIR:—

Health, grace and the blessing of our Lord be with you, Amen.

We rejoice greatly to hear, that our dear and beloved son in Christ, Phillip, Catholic King, has named and appointed you Governor of Florida, creating you adelantado thereof; for we have had such an account of your person, and so full and satisfactory report of your virtue and nobility, that we believe without hesitation, that you will not only faithfully, diligently and carefully perform the orders and instructions given you by so Catholic a king, but we trust also that you by your discretion and habit will do all to effect the increase of your holy Catholic faith and gain more souls to God. We are well aware, as you know, that it is necessary to govern these Indians with good sense and discretion, that those who are weak in their faith from being newly converted, be confirmed and strengthened, and idolaters be converted and receive the faith of Christ, that the former may praise God, knowing the benefit of his Divine mercy, and the latter, still infidels, may by the example and model of those now out of blindness, be brought to a knowledge of the truth, but nothing is more important in the conversion of these Indians, and idolaters, than to endeavor by all means to prevent scandal being given by the vices and immoralities of such as go to those Western parts. This is the key of

this holy work, in which is included the whole essence of your charge.

You see, noble sir, without our alluding to it, how great an opportunity is offered you in furthering and aiding this cause, from which result: 1. Serving the Almighty; 2. Increasing the name of your king, who will be esteemed by men, loved and rewarded by God.

Giving you then our paternal and apostolical blessing, we beg and charge you to give full faith and credit to our brother, the Archbishop of Rossano, who in our name will explain our desire more at length.

Given at Rome with the Fisherman's ring, on the 18th day of August, in the year of our Redemption 1569, the third of our pontificate. Ensago Cronologico, ann 1569.

PIUS V, POPE.

This letter infused new life in all missionary enterprises. And though the account given by Coronado of the country, which he had traversed, was very unfavorable, the zeal of the missionaries urged them to further explorations. The Indian Missions of Mexico were steadily advancing to the north.

In 1580, there dwelt in the valley of St. Bartholomew a pious lay brother named Augustine Rodriguez, who had grown old amid austerities and toils in the Franciscan missions. Hearing from Indians who visited the mission, that populous countries unvisited by Spaniards, lay to the north, he burned with the desire to announce the Gospel of Christ to them. His zeal induced him to apply to his provincial for leave to go and learn their language. The Viceroy of Mexico approved the mission, and the good brother was not allowed to depart alone. A regular mission was projected. Father Francisco Lopez of Seville, was named Superior, the learned and scientific Father John de Santa Maria, with Brother Rodriguez were selected to accompany the expedition, and they all set out in the year 1581 with ten soldiers and six

Mexican Indians and advanced to the country of the Tehuas, apparently the Tignez of Coronado. At this point they were compelled to halt, for the soldiers seeing seven hundred weary miles behind them refused to proceed. The missionaries, after a vain appeal to their honor, pride, patriotism and religion, allowed them to depart and began to examine the tribe among whom they were. This New Mexican tribe lived then, as in Padilla's time, in their peculiar houses and, unlike the wild Indians of the plains beyond, dressed in cotton mantles.

The missionaries were so pleased with the manners of the people, that they resolved to begin a mission among them, and the success of their first effort so exalted their hope, that they sent Father John de Santa Maria back to Mexico to bring auxiliaries. Fearless and reliant on his skill, the missionary set out alone with his compass to strike for the nearest settlement, but while asleep by the wayside, on the third day after his departure, he was surprised and killed by a party of wandering Indians. The others meanwhile proceeded with their missionary labors, instructing the people, till at last, in an attack on the town, Father Lopez fell beneath the shafts of the assailants, and Brother Rodriguez, the projector of the mission, was left to conduct it alone.

The people were not indifferent to his teaching, but vice had charms too powerful to submit to the doctrine of the Cross. Rodriguez inveighed with all the fire of an apostle against the awful sins to which they were addicted, till weary at last of his reproaches, they silenced the unwelcome monitor in death.

Meanwhile the returning soldiers had excited the anxiety of the Franciscans, and at their instance, Don Antonio de Espejo, a rich, brave and pious man, set out in 1582 with Father Bernadine Beltran, but arrived only to learn the death of all.

Some time after two other Franciscans, who accompanied an expedition under Castano, were put to death at Puaray, but no details remain.

In 1597, Juan de Onate led a colony to the Northern Rio Grande and founded San Gabriel, the first Spanish post in that quarter. Eight Franciscans had set out with him under Father Roderic Duran, but as the latter returned with a part of the forces, the other missionaries proceeded with Father Alonzo Martinez as commissary or superior.

For a year Onate was engaged in establishing his post and exploring the country; the missionaries on their sides investigating the manners, customs, language and religion of the people. Having in addition to the knowledge already acquired of their mechanical arts and singular dwellings, sought to unravel their theology, they found great difficulty. All were very loth to speak at any length on the point. They learned, however, that they adored principally three demons, or rather sought to propitiate them, especially in time of drought. These deities were called Cecapo, Cacina and Homace; to the first of whom a temple was raised some ten feet wide and twice as deep. At the end sat the idol of stone or clay, representing the God bearing some eggs in one hand and some ears of maize in the other. In this temple an old woman presided as priestess, and directed the ceremonies by which the natives implored rain, a blessing the more necessary as the streams frequently run dry.*

At the close of a year Onate wished to send a report of his proceedings to Mexico. To bear the dispatches and to urge the dispatch of reinforcements, he selected the commissary, Father Martinez, who set out with Father Christopher Salezar and the lay brother Peter de Vergara; but on the way Father Christopher died and was buried under a tree in the wilderness.

The account brought by Father Martinez induced the provincial to send new missionaries, and as Martinez was unable to return, Father John de Escalona, a man of great

* These missionaries, who in after years had gone further north, were cut off by the Indians between 1650 and 1680 and none of them returned. More than a century later 'n 1781 an expedition accompanied by Jesuit missionaries set out for this region from Santa Fe, New Mexico, but did not return

virtue and sanctity, was chosen commissary in his stead and set out with several Fathers of his order. Meanwhile, Onate with Father Francis de Melasco and a lay brother struck farther into the country, but without effecting any good.

There is extant a letter of Father Escalona dated in 1601, in which he speaks despondingly of the Indian mission and of the little good which he and his associates had been as yet able to do, from the manner in which Onate controlled and interrupted their labors.

His superiors did not, however, share his despondency. They sent out six new missionaries under Father Francis de Escobar, now appointed successor to Escalona. Under this enterprising missionary the Church took new life. The missionaries already there, Escalona, Francis de San Miguel, Francis de Zamorra, Lopez Inquierdo, Gaston de Peralta, skilled in all the accessories needed — a knowledge of the language and people and a sort of naturalization among them, soon made rapid progress. By the year 1608, when Father Escobar was at last allowed to resign his post as commissary, the missionaries in New Mexico had baptized eight thousand of the people. His successor, Father Alonzo Peinado, was no less skillful as a director, or successful as a missionary. Gradually the Cross advanced from town to town, and in all won votaries, who had at last forsaken Cocapo to worship Christ.

Of the state of the mission in 1626, less than thirty years after its foundation, we have a detailed account in a memoir addressed to the Spanish Court by Father Benavides, one of the apostles of New Mexico. A mission had just then been established at Socorro, making the twenty-seventh in New Mexico. Several of these stations possessed large and beautiful churches. At Queresall many were baptized, and many at other towns. There were residences or convents at Antonio or Seneca, Socorro, Pilebo, Sevilletta, St. Francis and Isletta, among the Topiras, the Teoas, the Picuries and at Zuni, while Santa Fe, Pecos, St. Joseph or Hemes and the Queres

could boast their sumptuous churches; and missionaries were residing not only in the different missions of Zuni, but in Acoma, which had so often been reddened with Spanish blood. So rapid had been the progress of Christianity and civilization on the Rio Grande, that the Indians or Pueblos, as they began to be called, could read and write there before the Puritans were established on the shores of New England.

CHAPTER VI.

RETROSPECT OF THE SPANISH MISSIONS.

The mode of erecting a mission was somewhat peculiar. The priest generally accompanied an expedition, the leader of which represented the Spanish sovereign, and in his name took possession of the new country. As the formalities used on such occasions had a beautiful religious interest, they are here given in detail:

The locality was taken possession of by the lay authority, a tent was erected as a temporary chapel, the Fathers in procession proceeded to bless the place and the chapel on whose point a crucifix or simple wooden cross was raised. The holy sacrifice was then offered up and a sermon preached on the coming and power of the Holy Ghost; the *Veni Creator* was sung and a Father was charged with the direction and responsibility of the mission.

The Indians were attracted by little presents. To the men and women were given small pieces of cloth, or food, and to the children small bits of sugar. They would soon gather around the missionaries when they found how good and kind they were and the priests were not slow in picking up the language. They became the fathers and instructors of the poor ignorant Indians, catechized them in the mysteries of faith, collected them into villages around the mission church and taught them to plough and cultivate the lands, to sow wheat, to grind corn to bake, how

to yoke the oxen for work, how to spin and weave their clothing, to prepare leather for hides, and instruct them in the rudiments of commerce.

The reduction plan was begun in two different modes. In Florida, the converts with Indians from other parts, were formed into villages near the Spanish settlements and were gradually trained to the usages of civilized life, and in this way a series of Christian villages spread over the country. In these the missionary had merely a spiritual power; the Indians were left free under the government of their chiefs and their progress was consequently slow. They remained to all intents a distinct class.

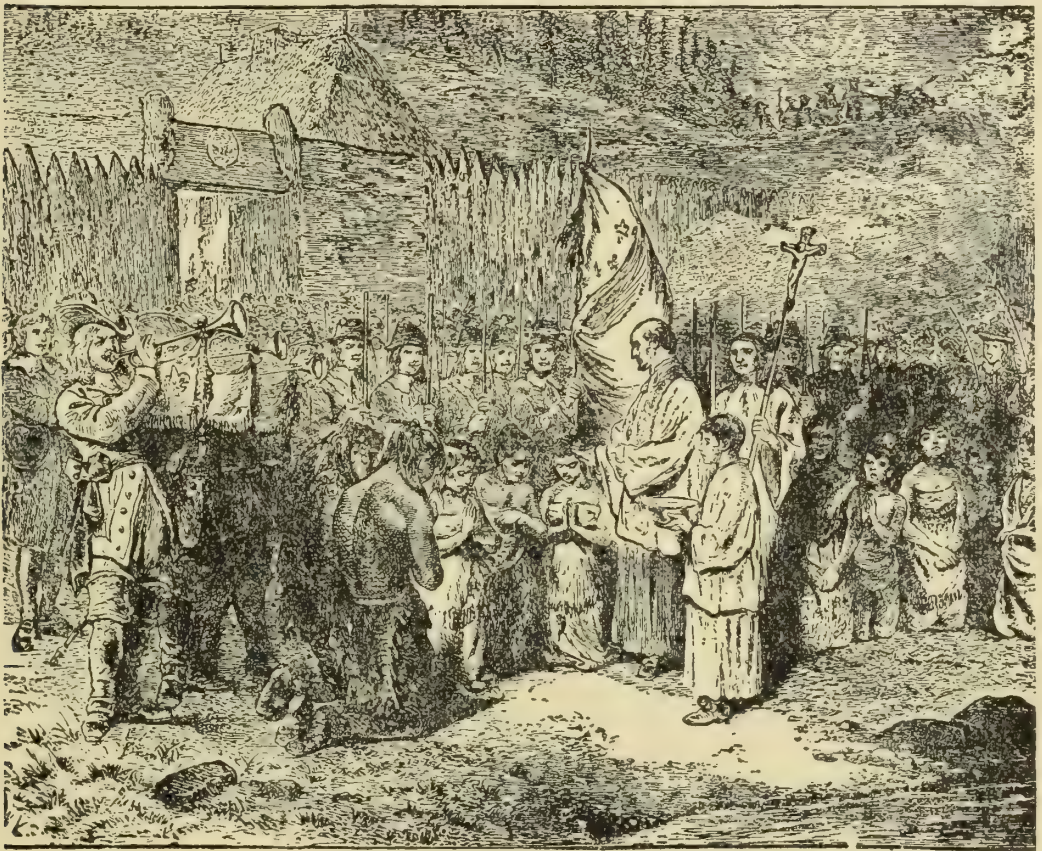
In New Mexico and California another system prevailed. A mission was erected, containing a church, shops, infirmaries, granaries, schools and other necessary apartments. Two missionaries with some converted Indians and a stock of cattle, agricultural implements, tools and machinery took possession and endeavored to draw some of the surrounding natives to the mission. This was done chiefly among the converted Indians. Once in the mission, the native was no longer free; under the compulsory system employed he was instructed in Christianity, accustomed to labor and, according to the ability which he displayed, applied to some trade. Each one belonged to a section governed by a chief, who led his party to church or labor and was frequently not sparing in blows in enforcing promptness. Against this the Indian first rebelled, but as all his wants were satisfied, he soon became attached to his life and would draw others of his countrymen in and easily persuade them to submit to the routine.

Many learned Spanish thoroughly and all acquired a knowledge of the Christian religion, which they faithfully practiced. Thus they gained two great benefits—peace and comfort in this life and means of attaining happiness in the next. Many writers have, however, denounced this compulsory system as one of tyranny, as degrading a noble and independent race into a herd of slaves. Religious prejudice has clearly some part in the condemnation thus



SILVAN LAKE IN CUSTER PARK.

freely given by a class of writers, as is evinced by their ignorance of Catholic doctrines and the slighting tone in which they speak of them, but still the question arises as to the merit of the system. The motive and the success of an act do not always justify the means, and in the present case, while the former was undoubtedly good, and the latter great beyond a parallel, the fact that the missionaries tem-



BAPTISM OF INDIANS AT PORT ROYAL.

porarily deprived the Indians of their liberty, is considered an act altogether unjustifiable.

Modern theorists consider the savage of the plains a man endowed with equal social rights as the inhabitant of a civilized State. In the eyes of the Spanish missionaries he was a child to be instructed, and might be put under restraint in order to teach him the rudiments of religion, learning and the means of support. This is the question in its last resort, and we are inclined to consider the missionaries as correct in their view. The officers of the

United States have come to the same conclusion. Moreover, the Indians themselves, when instructed, approved of the measure and when restored to freedom by the government, regretted the period of subjection. Of this there are innumerable proofs. The condition of the wild Indian is well known, that of the mission Indian under the Fathers equally so, that of the mission Indians since their liberation a matter of daily comment. The native in the first was ignorant of God and of the arts of civilized life, in the second, a Christian industrious and happy, though to some extent enslaved, in the third a poor, degraded being.

“The best and most unequivocal proof,” says Forbes, “of the good conduct of the Franciscan Fathers, is to be found in the unbounded affection and devotion invariably shown towards them by their Indian subjects. They venerate them not only as friends and fathers, but with a degree of devotedness approaching to adoration. On the occasion of the removals, which have taken place of late years from political causes, the distress of the Indians in parting with their pastors has been extreme. They have entreated to be allowed to follow them in their exile with tears and lamentations, and with all the demonstrations of true sorrow and unbounded affection. Indeed, if there ever existed an instance of the perfect justice and propriety of the comparison of the priest and his disciples to a shepherd and his flock, it is in the case of which we are treating.”

The chief of the Kechis of St. Luis Rey told Bartlett, “that his tribe was large and his people happy, when the good Fathers were there to protect them. That they cultivated the soil, assisted in rearing large herds of cattle, were taught to be blacksmiths and carpenters, as well as other trades, that they had plenty to eat and were happy.
* * * Now they were scattered about, he knew not where, without a home or protectors, and were in a miserable, starving condition.”

“Christian sects,” says Bartlett himself, “may cavil about their success among the Indian tribes, but it is an undeniable fact, that the Jesuits (by which he means

Catholic missionaries), accomplished more during their sway, than all other religious denominations. They brought the tribes of Mexico and California under the most complete subjection and kept them so until their order was suppressed. And how was this done? Not by the sword, nor by treaty, nor by presents. The Indian was taught Christianity with many of the arts of civilized life and how to sustain himself by his labor.

CHAPTER VII.

FUR TRADE.

As soon as the discoveries of Columbus were made known, the French competed without delay for discoveries of their own in the New World. Within seven years of the discovery of the continent the fisheries of Newfoundland were known to the hardy sailors of Brittany and Normandy and they continued to be frequented. The island of Cape Breton took its name from their remembrance of home, and in France it was usual to esteem them the discoverers of the country. A map of the Gulf of St. Lawrence was drawn in 1506 by Denis, a citizen of Hoyfleur.

In 1508 savages from the northeastern coast had been brought to France. Ten years later plans of colonization in North America were suggested by De Lery and Saint Just.

On the 20th of April, 1534, James Cartier, a seaman of St. Malo, left that harbor with two ships, and prosperous weather brought him on the 10th of May, to the coast of Newfoundland. Having almost circumnavigated the island he turned to the south and, crossing the gulf, entered a bay which he called Des Chaleurs, from the heat of midsummer.

Finding no passage to the west in July, he sailed along the coast as far as the small inlet of Gaspee. There upon

a point of land at the entrance of the haven a lofty cross was raised, bearing a shield with the lilies of France and an appropriate inscription.

Leaving the bay of Gaspee, Cartier in August discovered the great river of Canada, and ascended it till he could discern land on either side. As he was unprepared to remain during the winter, on the 9th of that month he steered for Europe and on the 5th of September his fleet entered the harbor of St. Malo. His native city and France were filled with the fame of his discoveries, but no mines of silver and gold, no veins abounding in diamonds and precious stones had been promised by the faithful narrative of the voyage. The colonization of the country was slow and many attempts to settle failed.

In May, 1541, Cartier built a fort near the site of Quebec. In March, 1604, two ships left the shores of France not to return until a permanent settlement should have been made in America, and in the Fall of that year Pontricourt settled at a place which he called Port Royal. The possessions of Pontricourt were, in 1607, confirmed by Henry IV. In the next year the apostolic benediction of the Roman Pontiff followed families which exiled themselves to evangelize infidels. Mary of Medici herself contributed money to support the missions, which the Marchioness of Guercheville protected; and in 1610, by a compact with De Bien-court, the order of Jesuits was enriched by an imposition on the fisheries and fur trade.

The arrival of the Jesuits in 1611 was signalized by conversions among the natives. The colonial finances were not prosperous. In the absence of coin beaver skins long served as currency. In 1669 the council declared wheat a legal tender at four francs the minot, or three French bushels, and five years later all creditors were ordered to receive moose skins in payment at the market rate.

The Canadians paid no direct civil tax, except in a few instances where temporary and local assessments were ordered for special objects. It was the fur trade on which the chief burden fell; one-fourth of the beaver skins and

one-tenth of the moose hides belonged to the king. The fur trade absorbed the enterprise of the colony and from first to last Canada lived chiefly on beaver skins, and the fur trade produced an effect akin to that of gold in our own days, and the deepest recesses of the wilderness were invaded by eager seekers after gain.



BEFORE THE ADVENT OF THE PIONEER.

The government tried without ceasing to control this traffic, but it never succeeded. It aimed above all things to bring the trade home to the colonists to prevent them from going to the Indians, and induce the Indians to come to them.

To this end a great annual fair was established at Montreal. Thither every summer a host of savages came, along from the lakes in their bark canoes. A place was assigned them a little distance from the town. They landed, drew up their canoes in a line on the bank, took out their packs of beaverskins, slung their kettles and encamped for the night. On the next day there was a grand council on the common between St. Paul street and the river. Speeches of compliment were made amid a solemn smoking of pipe.

The Governor-General was usually present, seated in an arm-chair, while the visitors formed a ring around him, ranged in order of their tribes. On the next day the trade began in the same place.

Merchants of high and low degree brought up their goods from Quebec, and every inhabitant of Montreal sought a share in the profits. Their booths were set along the palisades of the town and each had an *interpréter*, to whom he usually promised a certain portion of his gains. A similar fair was established at Three Rivers for the Algonquin tribes north of that place.

These yearly markets did not fully answer the desired object. There was a constant tendency among the inhabitants of Canada to move as close as possible to the Indians, and make "squatter" settlements.

This was not all, for the more youthful and vigorous part of the population soon began to escape into the woods and trade with the Indians far beyond the limits of the remotest settlements. One Ondiette and his associates paid the Crown three hundred and fifty thousand livres for the privilege to collect the imports from a certain district, and they were also vested with an exclusive right of transporting all the beaver skins of the colony in France. On their part they were compelled to receive all beaver skins brought to their magazines, and after deducting the fourth belonging to the king, to pay for the rest at a fixed price. This price was graduated to the different qualities of the fur, but the average cost to the collector was a little more than three francs per pound.

The inhabitants would barter all their furs with merchants, but the merchants must bring them all to the magazines of Ondiette, who paid in receipts convertible into bills of exchange. He soon found himself burdened with such a mass of beaver skins that the market was completely glutted. The French hatters refused to take them all, and for that part which they consented to take, they paid chiefly in hats, which Ondiette was not allowed to sell in France, but only in the French West Indies, where

very few people wanted them. An unlucky fashion of small hats diminished the consumption of furs and increased his embarrassments, as did also a practice common among the hatters of mixing rabbit fur with the beaver.

In his extremity he bethought himself of setting up a hat factory for himself under the name of a certain licensed hatter, thinking thereby to alarm his customers into buying his stock. The other hatters rose in wrath and petitioned the minister. The new factory was suppressed and Ondiette soon became bankrupt. Another company of farmers of the revenue took his place with similar results.

The action of the law of supply and demand was completely arrested by the peremptory edict which, with a view to the prosperity of the colony and the profit of the king, required the company to take every beaver skin offered.

All Canada, thinking itself sure of its price, rushed into the beaver trade, and the accumulation of unsalable furs became more and more suffocating, the farmers of the revenue could not meet their engagements, their bills of exchange were unpaid, and Canada was filled with distress and consternation.

On the 24th of May, 1664, Louis XIV, King of France, had signed an edict creating the Company of the West, the first of a number of great trading corporations. Any person of the kingdom or out of it might become a partner by subscribing within a certain time not less than three thousand francs.

France was a mere patch on the map compared with the vast domains of the new association. Western Africa from Cape Verde to the Cape of Good Hope, South America between the Amazon and the Orinoco, Cayenne, the Antilles, and all New France from Hudson Bay to Virginia and Florida were bestowed on it forever to be held of the Crown on the simple condition of faith and homage. Monopoly of trade was granted it for forty years. Sugar from the Antilles, and furs from Canada were the chief sources of the expected profit, and Africa was to supply the slaves to raise the sugar.

Scarcely was the grand machine set in motion when its directors betrayed a narrowness of mind, which boded the enterprise no good. Canada was the chief sufferer. Once more bound hand and foot, she was handed over to a selfish league of merchants, monopoly in trade and monopoly in government. Nobody but the company had the right to bring her the necessaries of life, and nobody but the company had the right to exercise the traffic, which alone could give her the means of paying for these necessaries.

Moreover, the supplies which it brought were insufficient and the prices which it demanded were exorbitant. It was throttling its wretched victims. The Canadian merchants remonstrated. It was clear that, if the colony was to live, the system must be changed and a change was accordingly ordered. The company gave up its monopoly of the fur trade, but reserved the right to levy a duty of one-fourth of the beaver skins and one-tenth of the mooseskins, and it also reserved the entire trade of Tadensac, that is to say the trade of all the tribes between the Lower St. Lawrence and Hudson's Bay. It retained besides the exclusive right of transporting furs in its own ships, thus controlling the commerce of Canada and discouraging or rather extinguishing the enterprise of Canadian merchants. On its part it was required to pay governors, judges and all the colonial officials out of the duties it collected.

Yet the king had the prosperity of Canada at heart and he proceeded to show his interest in her after a manner hardly consistent with his late action in handing her over to a mercenary guardian. In fact he acted as if she had still remained under his paternal care. He had just conferred the right of naming a governor and intendant upon the new company but he now assumed it himself, the company with a just sense of its own unfitness, readily consenting to this suspension of one of its most important privileges. Daniel de Remy Sieur de Courcelle, was appointed governor and Jean Baptiste Talon was appointed intendant.

CHAPTER VIII.

THE FRENCH IN AMERICA.

In the year 1670, Charles II, king of England, granted a charter to Prince Rupert and seventeen other noblemen and gentlemen, incorporating them as "The Governor and Company of Adventurers of England trading with Hudson's Bay," and securing to them "the sole trade and commerce of those seas, straits, bays, rivers, lakes, creeks and sounds, in whatever latitude they shall be, that lie within the entrance of the straits, commonly called Hudson's Straits, together with all the lands and territories upon the countries, coasts and confines of the seas, bays, etc., aforesaid, that are not already actually possessed by or granted to any of our subjects, or possessed by the subjects of any other Christian province or State."

Besides the complete control and ownership and entire judicial, legislative and executive power within these vague limits (which the company finally agreed to accept as meaning all lands watered by streams flowing into Hudson Bay), the corporation received also the right to "the whole and entire trade and traffic to and from all havens, bays, creeks, rivers, lakes and seas into which they shall find entrance or passage by water or land out of the territories, limits or places aforesaid."

The company in return was to discover a passage from the Northern Atlantic to the Pacific Ocean, and to establish trading posts along the line. Talon, who was then intendant of Canada and anxious to do all he could for his master, Louis XIV, and for his New France, determined to oppose the progress of England, occupy the interior of the country and hold it for France against every other nation. England was to be hemmed within a narrow strip of seaboard, while at the south, Talon aimed at securing a port in the Gulf of New Mexico to keep the Spaniards in check, and

dispute with them the possession of the vast region which they claimed as their own.

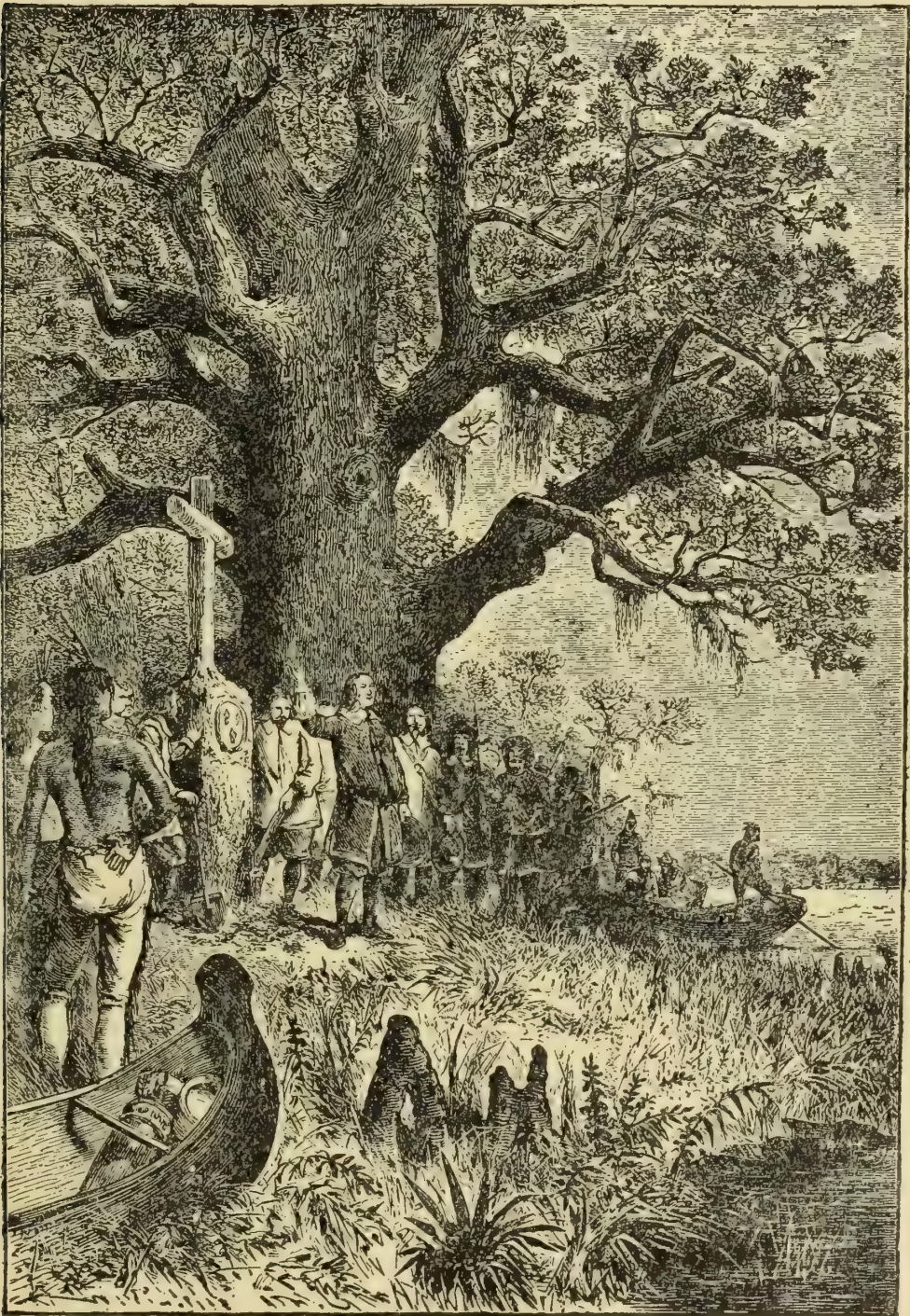
But the interior of the country was an unknown world. Traders and missionaries like Menard, Marquette and Hennepin had told of the natives who lived beyond the great lakes, and far distant great rivers, and the wealth of the country. Talon availed himself of all the means at his disposal to obtain his end. Jesuits, officers, fur traders and enterprising schemers all were called to work for their king and extend the boundaries of his domain.

In 1670, he ordered Dumont De Saint-Lusson and La Salle to prepare themselves for the discoveries. The first was to search for copper mines on Lake Superior, and at the same time to take personal possession of the whole interior for the king. Saint-Lusson set out with a small party of men and Nicholas Perrot as his interpreter. On the morning of the 16th of June, 1671, he led his followers, fifteen in number, all fully equipped and armed, to the top of the hill close to Sault St. Marie, a village of the Santeurs. Here, too, in the vestments of their priestly office were found the following Jesuit Fathers: Claude Dallon, Superior of the Mission of the Lakes, Gabriel Denillets, Claude Allonez and Louis Andre.

All around the great throng of Indians, who had gathered from far and near,—Crees, Monsonis, Arrikarees and Nipissings stood, crouched, or reclined at length with eyes and ears intent. A large cross of wood had been made ready. Dallon in solemn form pronounced his blessing on it, and then it was reared and planted in the ground, while the Frenchmen, uncovered, sang the *Vexilla Regis*. Then a post of cedar was planted beside it with a metal plate attached, engraven with the royal arms. While Saint-Lusson's followers sang the *Exaudiat* one of the Jesuits said a prayer for the king.

Saint-Lusson now advanced and, holding his sword in one hand and raising with the other a sod of earth, proclaimed in a loud voice: "In the name of the most high, mighty and redoubted Monarch, Louis Fourteenth of that name, most

Christian king of France and of Navarre, I take possession of this place, Sainte Marie du Sault, as also of Lakes Huron and Superior, the Island of Manatonlin, and all



LA SALLE CLAIMS THE MISSISSIPPI VALLEY FOR FRANCE.

countries, rivers, lakes and streams, continuous and adjacent thereunto, both which have been discovered and those which may be discovered hereafter, in all their length and

breadth, bounded on the one side by the seas of the north and of the west, and on the other by the South Sea, declaring to the natives thereof that from this time forth they are vassals of His Majesty, bound to obey his law and follow his customs, promising them on his part all succor and protection against the incursions and invasions of their enemies, declaring to all other potentates, princes, States and republics — to them and to their subjects — that they cannot and are not to seize and settle upon any part of the aforesaid countries save under the good pleasure of His Most Christian Majesty and of him who will govern on his behalf; and this on pain of incurring his resentment and the efforts of his arms. *Vive le Roi!*”

La Salle after various vicissitudes reached the mouth of the Mississippi early in 1682. A short distance above the mouth of the river a column was erected bearing the arms of France, and inscribed with the following words: “*Louis Le Grand, Roi de France et de Navarre, Reign; Le Neuvieme Avril, 1682.*”

His companions were mustered under arms, and while the Indians and their squaws looked on in wondering silence, they chanted the *Te Deum*, the *Exaudi*, and the *Domine Saloum fac Regem*. Then amid volleys of musketry and shouts of “*Vive le Roi,*” La Salle planted the column in its place, and standing near it proclaimed in a loud voice: “In the name of the most high, mighty, invincible, and victorious Prince, Louis the Great, by the grace of God, King of France and Navarre, Fourteenth of that name, this ninth day of April, one thousand, six hundred and eighty-two, in virtue of the commission of his Majesty, which I hold in my hand, and which may be seen by all whom it may concern, have taken and do now take in the name of his Majesty and of his successors to the crown, possession of this country of Louisiana, the seas, harbors, ports, bays, adjacent straits, and all the nations, peoples, provinces, cities, towns, villages, mines, minerals, fisheries, streams and rivers within the extent of the said Louisiana, from the mouth of the great river St. Louis, on

the eastern side, otherwise called the Ohio, Alighinsipon [Alleghany] or Chickagona, and this with the consent of the Chonanons, Chicadras and other people dwelling therein, with whom we have made alliance; as also along the river Colbert or Mississippi and the rivers which discharge themselves thereinto from its source; beyond the country of the Kions Nadonessieux [Sioux] and this with their consent, and with the consent of the Motantees, Illinois, Merigamias, Arkansas, Natchez and Koroaz, which are the most considerable natives dwelling therein, with whom we have also made alliance either by ourselves or by others in our behalf, as far as its mouth to the Sea or Gulf of Mexico about 27 degrees of the elevation of the North Pole, and also to the mouth of the river of Palms, upon the assurance we have had from the natives of these countries, that we were the first Europeans who have descended or ascended the said river Colbert [Mississippi], hereby protesting against all who may hereafter undertake to invade any or all of these aforesaid countries, peoples or lands to the prejudice of the rights of his Majesty, acquired by the consent of the natives dwelling herein. Of which and of all else that is needful, I hereby take to witness those who hear me and demand an act of the Notary here present.”

Shouts of *Vive le Roi* and volleys of musketry responded to his words. Then a cross was planted beside the column and a leaden plate buried near it, bearing the arms of France with a Latin inscription:—

“*Ludovicus Magnus regnat.*”

The weather-beaten voyageurs joined their voices in the grand hymn of the *Vexilla Regis*:—

“The banners of Heaven’s king advances.
The mystery of the Cross shines forth.”

A map was prepared by Franquelin of the country thus claimed, which is still preserved at the Depot des Cartines of the Marine at Paris. The boundaries are laid down as

follows: Running along the southern shore of Lake Erie, thence following the heads of the streams that flow into Lake Michigan, it then turns northwest and is lost in what is now Manitoba. On the south the line is drawn by the heads of the streams flowing into the Gulf of Mexico as far west as Mobile after which it follows the shore of the Gulf to a little south of Rio Grande, then runs west, northwest and finally north along the range of the Rocky Mountains as far north as the fifty-second degree of northern latitude and is lost in what is now British Columbia.

CHAPTER IX.

FRENCH MISSIONARY EXPLOITS.

Father Rene Menard, born in 1604, had been in France confessor to Madame Daillebout, one of the founders of Montreal. He came to Canada in the "Esperance," which sailed from Dieppe on the 26th of March, 1640, and after having been compelled to put back by storms, reached Quebec in July. After being director of the Ursulines he was sent to the Huron country, and succeeded Raymbaut as missionary of the Algonquins, Nippisings and Atontratas.

On the fall of the Hurons he was stationed at Three Rivers till he was sent to Onondaga among the Iroquois. After the close of St. Mary's at Ganentaa he was again at Three Rivers. His head was whitened with years, his face scarred with wounds, received on the streets of Cayuga, for he had been one of the first to bear the faith into Central New York. Thoroughly inured to Indian life, with many a dialect of Huron and Algonquin at his command, he sought to die as many of his earlier friends and comrades had long since done.

The West seemed a promised land to be reached only through the Red Sea of his own blood, and with joy he

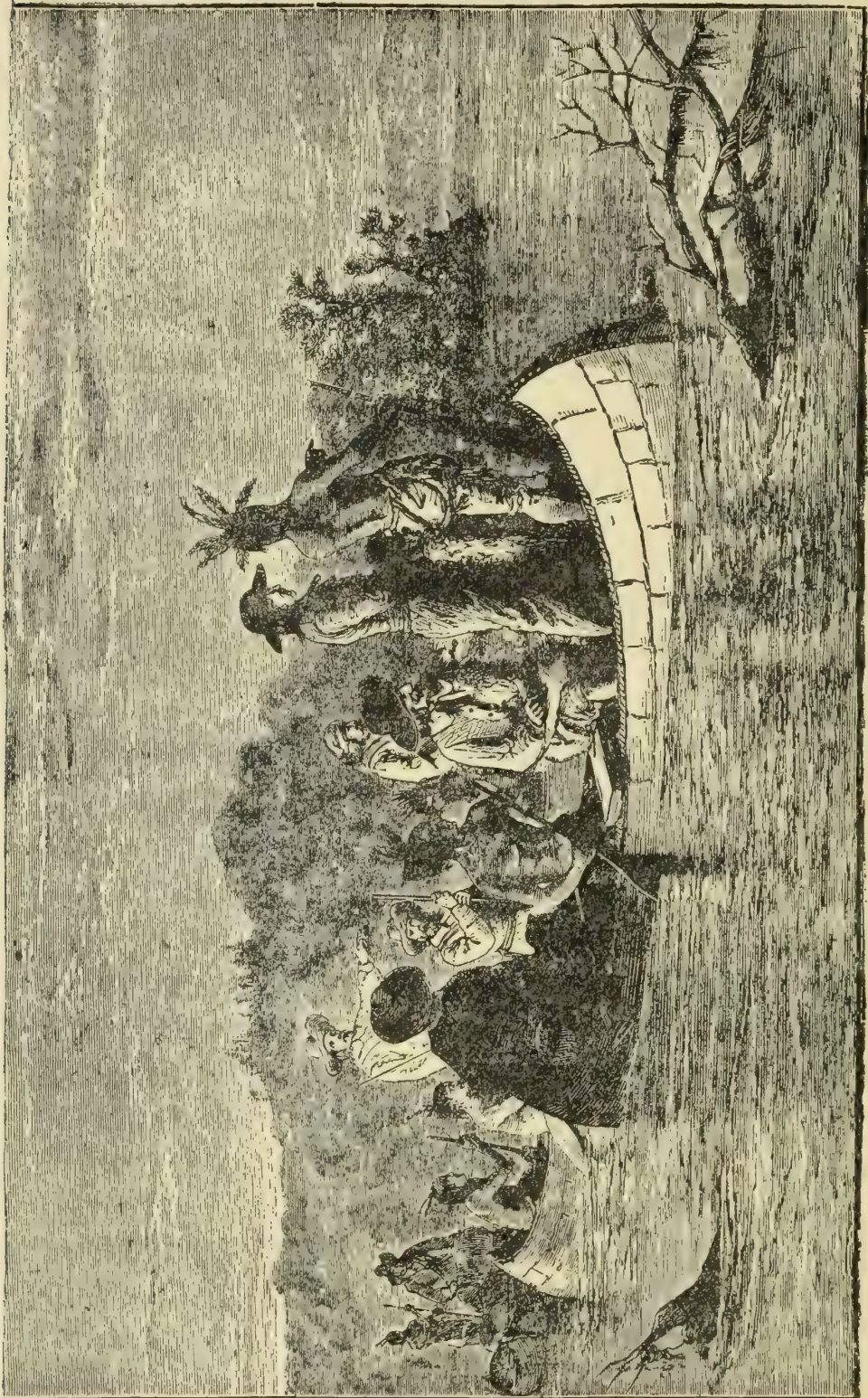
received the order to begin his march into the wilderness. We have still extant a letter, written by him, in August, 1660, on leaving Three Rivers, replete with a spirit of sacrifice which can scarce find a parallel. He went destitute and alone, broken with age and toil but with a life which he saw could last only a few months; yet he had no thought of recoiling, it was the work of Providence, and in utter want of all necessities of life he exclaims: "He who feeds the young raven and clothes the lily of the field, will take care of his servants and should we at last die of misery, how great our happiness would be."

In 1660, soon after leaving Three Rivers he met Bishop Laval. "Every consideration, Father," said the pious prelate, "would seem to require you to remain here, but God, stronger than all, will have you there," and he pointed to the distant West.

In a letter of July, 1661, he announces his desire or rather his resolution to attempt a journey of two or three hundred leagues west over a land intersected by lakes and marshes, in order to announce the gospel to the poor, populous nations of the Dahcotahs. The Indians at the mission implored the aged missionary not to attempt a journey so evidently beyond his strength. All the French joined their entreaties to theirs. Replying, he said: "I hope to die on the way." No fear of death then could deter him from answering a call of duty. His faithful companion, the Dominie John Guerin, in the spirit of the Cross, and reminding him of St. Francis Xavier expiring at the very threshold of the Celestial Empire, induced him to attempt the voyage, even if he too should perish ere he reached the scene of his labors. "God calls me thither, I must go, if it cost me my life; I cannot suffer souls to perish under the pretext of saving the bodily life of a wretched old man like myself. What! are we to serve God only when there is nothing to suffer and no risk of life?"

He set out with some Hurons whom accident had brought to the mission, but on reaching a lake they left him. After waiting here a month for their return, he and

Guerin proceeded, but on the 10th of August the poor Father, following his companion, at the last portage of the



MARQUETTE ON THE MISSISSIPPI.

river mistook one road for another and was lost or seized by some band of Indians. Guerin having accomplished the portage, sought him but in vain; hurrying on to the

Huron village, he by signs at last procured assistance, but no trace of the missionary could be found. Long after his bag was found in the hands of an Indian, who refused to tell where he had got it, and some of his chapel-service was subsequently seen in a lodge. He was probably murdered at the first rapid of the Menomonee in Michigan, closing a life of assiduous toil in the missions of America with a death glorious in the sight of heaven, although there was none to chronicle his sufferings and his constancy in death. He was 57 years of age.

In August, 1665, Father Claude Allonez embarked by way of Ottawa for the Far West. Early in September he reached the rapid river through which the waters of the upper lakes rush to the Huron. On the second of that month he entered the "Superior" or upper lake, which the savages revered as a divinity.

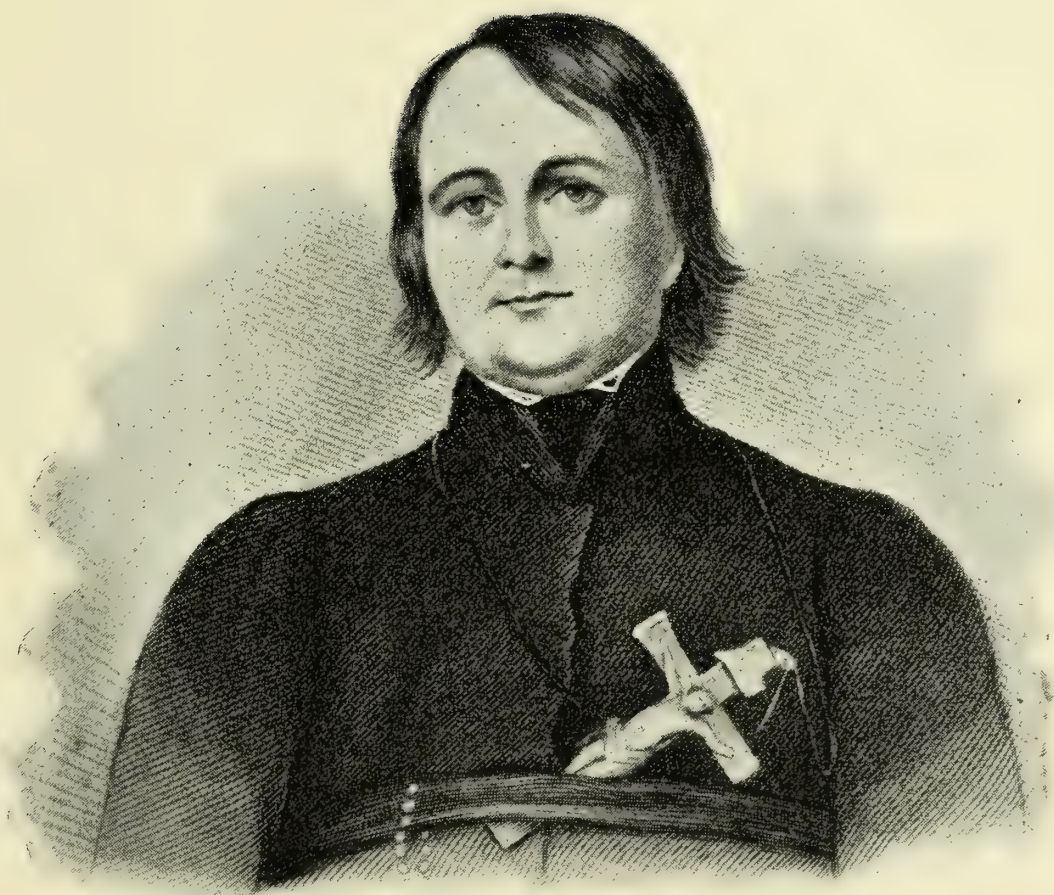
Its entrance presented to him a spectacle of rugged grandeur. He passed the lofty ridge of naked sand which marks the shore by its stupendous pile of drifting barrenness; he sailed beyond the cliffs of pictured sandstone which for twelve miles rise three hundred feet in height, fretted by the chafing waves into arches and bastions and wells, heaps of prostrate ruins and erect columns seemingly crowned with entablatures. On the first day of October he arrived at the great village of the Ojibwas in the bay of Chegoimegon, now within the limits of the State of Wisconsin. It was at a moment when the young warriors were bent on a strife with the Sioux. A grand council of ten or twelve neighboring nations was held to wrench the hatchet from the rash braves and Allonez was admitted to the assembly. In the name of Louis XIV and his Viceroy he commanded peace.

There, too, at the extremity of the lake, he met the impassive warriors of the Sioux, who dwelt to the west of Lake Superior in a land of prairies with wild rice for food, and skins of beasts for roofs of their cabins, on the banks of the great river, of which Allonez reported the name to be "Messipi."

After residing nearly two years chiefly on the southern margin of Lake Superior, Allonez in 1667 returning to Quebec urged the establishment of permanent missions and colonies of French emigrants, and such was his own fervor, and the earnestness with which he was seconded, that in two days, with another priest, Louis Nicolas, for his companion he was on his way back to the mission of Chegoimegon. In this year some Indians gave the French a massive specimen of very pure copper ore.

The prevalence of peace favored the progress of French dominion, a recruit of missionaries had arrived from France, and Claude Dablon and James Marquette repaired to the Ojibwas at the Sault to establish the mission of St. Mary. It is the oldest settlement begun by Europeans within the commonwealth of Michigan. For the succeeding years the illustrious triumvirate, Allonez, Dablon and Marquette, aided by other Jesuit priests, extended the influence of France to the head of Lake Superior on the one side and Green Bay on the other. From Green Bay the Fox River was ascended and a mission was established on its banks where it approaches nearest to waters flowing to the south and west.





P. J. De Smet S. J.

BOOK III.

CHAPTER I.

FATHER DE SMET.

Brave pious heart, and loving too as brave,
Who left thy kindred and thy native land,
The savage Indian's deathless soul to save.

I owe thee much, and yet I cannot pay,
For thou hast now no need of anything
That I can do, or think or say or sing —
What would my darkness offer to thy day?

Upon a hundred thousand heads, embrowned
And wild, thy hand the dancing waters poured!
Forth from thy guileless lips they heard the sound
Of Jesus' name — for evermore adored!

May they once more their Blackrobe, whiterobed see,
And praise the Lord for aye with thee!

On September 24th, 1815, Right Reverend William Louis Dubourg was consecrated Bishop of Upper and Lower Louisiana. (The former including the Black Hills.) On account of the troubled times, he decided not to reside in New Orleans, his See City, but to make St. Louis his home. So soon as he became acquainted with the general condition of his extensive diocese, he requested Father Anthony Kohlman, at that time Provincial of the Jesuits in Maryland, to send some Fathers of the society to establish a college in his diocese and take spiritual charge of the Indian tribes that still lingered in Missouri. Owing to the circumstance that there were not more members of the

society in Maryland at that period than were strictly required to fulfill obligations which had been previously assumed, Father Kohlman was not then able to comply with the Bishop's zealous wish for help.

Early in the year 1823, Bishop Dubourg went to Washington City for the purpose of consulting President Monroe and the Secretary of War, John C. Calhoun, on the subject of devising means for educating children of the Indian tribes within his diocese. He was kindly received by these courteous officials, and during his interview with them, Mr. Calhoun, the Secretary of War, suggested the expediency of inviting the Jesuits of Georgetown to furnish members of their order to assist in that work.

The Bishop at once laid this proposition before Rev. Charles Neale, who had recently succeeded Rev. Anthony Kohlman in the office of Provincial. The Bishop offered to donate a fertile farm near the Missouri river in a north-western direction from St. Louis and at a distance of seventeen miles from that town, and make over to them his own church and residence in St. Louis. Father Neale believed it might be possible for him to promptly accept the former offer, with the view of getting up a school, but priests could not be spared over and above to take charge of the church in St. Louis. The Bishop's kind offer was made at an opportune time for the Jesuits of Maryland to spare a number of their younger members, as the sequel will show.

In the year 1820, Rev. Charles Nerinckx went to Europe on business connected with his missions in Kentucky, and when he returned to the United States in 1821, he was accompanied by a number of young men, most of whom were natives of Belgium, who came to America with the intention of devoting their lives to priestly and missionary employments.

Among them were F. J. Van Assche, P. J. DeSmet, P. J. Verheagen, J. A. Elet, F. L. Verreydt and J. B. Smedts from Belgium, whose aim in coming to the United States was to join the Jesuits' Society in Maryland, a pur-

pose which they were encouraged to execute by the pious Father Nerinckx.

They were admitted as novices at White Marsh, Prince George's County, Maryland, on October 6th, 1821, and up to the time of their reception as novices they were under the impression, that in taking such a step, they were preparing to enter upon a missionary career among the aboriginal savages of America, for they believed that the Jesuits of Maryland had, or else were to have a number of Indian tribes under their spiritual care. The master of novices at White Marsh was the Rev. Charles Van Quickenborne, a Belgian priest from Ghent, who had come to the United States in 1817 also with the view of becoming a Jesuit and going to missions among the Indians.

At the beginning of the year 1823, Rev. Charles Neale, Provincial of the Jesuits in Maryland, and the master of novices, Rev. Charles Van Quickenborne, had determined that it was expedient to transfer the novices from White Marsh in Prince George's County to St. Thomas' Manor in Charles County. It had become necessary to take this step owing to the impoverished condition of the novitiate of White Marsh and the inability of the province to support the novices. The soil at White Marsh, which was originally fertile, had been exhausted by successive crops of corn and tobacco raised upon it for generations, without a year of intermission and besides that farm was burdened with a heavy debt, whereas the land in Charles County was very productive and the premises unencumbered by any debt.

It was under these circumstances, and while actually deliberating about the removal of the novices from White Marsh to Charles County, that Bishop Dubourg at the suggestion of John C. Calhoun, Secretary of War, again applied to the Jesuits of Maryland for a community of the order to settle in Missouri with a view of founding missions and schools among the Indian tribes dwelling within his diocese. His request was made at an auspicious time and his offer of the farm near Florissant readily accepted as a providential solution of the difficulties in

which the novitiate at White Marsh was then involved. The Provincial, Rev. Charles Neale, proposed the wish of Bishop Dubourg to Father Quickenborne, novice master, and expressed his own desire for the pious rector of White Marsh to be the leader and superior of a band including such of the novices as might freely choose to accompany him, and that with them and a few older members he should start for Missouri so soon as necessary arrangements for the journey could be made.

Father Van Quickenborne gave his cordial approval to the undertaking, which he did all the more fully and promptly, as it was a desire of being a missionary among the savage Indians, that had first prompted him to leave his native land and come to America.

Father Van Quickenborne announced to the novices the decision made by the provincial concerning his destination for Missouri, that a community of the society was to be established there, with a view of getting up a school for Indian boys and to sending out missionaries to evangelize the wild tribes. He also made known to them, that any of the novices who desired to accompany him would be free to do so, whereupon the six young Belgians already named as coming with Father Nerinckx to the United States in 1821, answered enthusiastically that nothing could be more pleasing to them than to be his companions in a journey to the region where the red man dwelt and his co-laborers in such work; they were already longing for the time to come, when the opportunity would be afforded them of devoting their lives to the conversion and civilization of the wild Indians in the Far West.

It was now plain that the pious designs of the zealous and far-seeing Bishop Dubourg were at length to be realized and that his plans for christianizing the Western tribes of Indians were likely to produce some good results. He believed, that while the young men were trained in virtue and learning at their new home in Missouri, the little community could support itself mainly by the excellent farm the members were to receive, and that a few years would

suffice to fit them for the wide field of usefulness which was even then ready for them in his extensive and growing diocese.

The members of the society selected to begin the new mission in the West made up a band of twelve: two priests, Rev. Charles Van Quickenborne, superior, and Rev. Peter J. Timmermans, his assistant. There were seven aspirants to the priesthood: F. H. Van Assche, P. J. DeSmet, J. A. Elet, F. L. Verreydt, P. J. Verheagen, J. B. Smedts and J. A. De Maillet; there were three lay brothers: Peter De Meyer, Henry Heisselman and Charles Strahan. The day settled on for their departure was April 11, 1823; they started early on that day, and when sunset came they had reached the immediate neighborhood of Baltimore, where they spent the night altogether in one large room. At Baltimore, their trunks, boxes and various parcels for the journey were placed on two large wagons, each drawn by six horses, and these wagons were hired to haul their goods all the way to Wheeling. Besides, they had taken with them from White Marsh a light spring wagon, drawn by two horses, in which were placed some smaller objects needed for the journey, and on this light wagon also they were to ride who became unwell or disabled, for the entire journey to Wheeling was to be made on foot.

All things being made ready, the party started from Baltimore on Monday, April 14th, on their way to Wheeling beyond the Alleghany Mountains, for the most painful portion of the long way to Missouri. The young men and the lay brothers had started two days earlier to Conewago, Adams County, Pennsylvania, where they remained five days in order to transcribe Father's Plowen's Instructions on Religious Perfection, begun at White Marsh, but not finished.

From Conewago they went to Frederick, where the rest of the party and the wagon were waiting them and they remained there one day. Father John McFroy, who then had charge of the church and residence at Frederick, presented to Father Van Quickenborne a fine roan horse, an

excellent pacer, which was of much advantage on the long journey across the mountains and for many years' service after the party arrived in Missouri. They went by way of Cumberland, resting one night in that town, at a boarding house. They carried their own bedding with them, lodging at nights in dwellings or out-houses, according to the exigencies of the case, and generally they cooked their own meals.

After a trip of eighteen days from Baltimore they reached Wheeling without having met with any serious accident. At Wheeling they were delayed three days, during which they were the guests of Mr. Thompson, a wealthy and hospitable Catholic gentlemen, whose worthy daughter, a member of the Sacred Heart Order, and lately deceased, has helped to keep her father's name in honorable remembrance; at his house the priests journeying from the diocese of Bardstown to Baltimore in those early days were accustomed to stop and rest, as appears by the letters and diaries of Rev. Charles Nerinckx and Father Bladin.

At Wheeling they purchased two flatboats, one of which carried the negro servants and the larger and heavier portion of the load to be transported; the other was occupied by Father Van Quickenborne and companions, the two boats being securely lashed together. When all was ready their little vessels floated out upon the placid current of the Ohio, "the beautiful river," about the beginning of May, 1823, with their interesting burden destined for the land of the red man on the banks of the far-rolling Missouri.

Two days after their departure from Wheeling their boats passed the mouth of the Little Kanawha River and the island two miles below it, where a costly pile of decayed grandeur still commemorated the eccentricities of the romantic and unfortunate Irish gentleman, Herman Blannerhasset. He had built a princely residence on this island in 1798, laid off his grounds in parks and gardens and grassy lawns and his home became a resort of learning and fashion. But in the year 1807 he joined Aaron Burr in

his conspiracy to dismember the Union and thereby he lost both his fortune and his reputation. Already in 1823 his once beautiful pleasure grounds were overrun with weeds and brambles and vulgar trees, and his dwelling house, burned down in 1811, was a heap of ruins, giving a peculiar sadness to the surrounding scene of complete solitude.

Father Van Quickenborne had provided a "pilot" or guide book for the river, but even Brother Strahan with his unquestioned proficiency in the art of navigation, was not able to verify from it all the important landmarks, or to use with unfailing certainty all its bearings, latitudes and departures and hence on one occasion, when winding through a group of thickly wooded islands, he and all the party became so perplexed over the directions given in the "pilot" and the points of the compass, as to conclude that the boats were actually returning up stream towards Wheeling.

The travelers made no stop at Cincinnati. Bishop Fenwick, who was consecrated for that new See only the preceding year, was not then in Cincinnati but at Louisville. They remained one day. Here the boats were unloaded and the freight was hauled in wagons to Portland, three miles from Louisville, and across a neck of land around which the river flows, making the segment of a circle. Between Louisville and Portland are the Falls of Ohio, so famous among river men. The empty flat boats were committed to a "Falls Pilot" to be steered down the rapids, and he was accompanied in the descent, which is perilous in low water, by young Van Assche.

But the party had another reason for making some stay in Louisville, it was the presence of the venerable missionary, Father Nerinckx, with whom most of them had first come to America. One brother, De Meyer, had come with him to the United States in 1817, and the seven novices had come with him in 1821.

Father Nerinckx had come to Louisville a few days previous in order to see safe on the steamboat a colony of Loretto nuns, going to the Burrens in Missouri, and he

awaited the arrival of his Belgian friends, whom he knew then to be coming near, also on their way to Missouri. It was a great gratification for this saintly and austere man man of God again to meet these heroic young men, now devoting themselves to a life of privations and toil for the religious welfare of the Indians in a place where, as they had been led to suppose, they could reasonably expect little of human comfort with no society save that of coarse, degraded and ignorant savages, beyond the borders of civilization. Father Nerinckx continued to the very end of his life to take a cordial interest in these young men, and one of the last acts of his life was to visit them at their new home in Missouri.

Louisville was then a small town, but it was growing rapidly in business and population. There were few Catholics there, yet their prospects for the future had improved since the Rev. Robert Abell had come the preceding year, 1822, to reside most of his time among them. Even at the Jubilee of 1826 there were only fifty communicants in Louisville.

Father Van Quickenborne had his horses and wagon and all goods belonging to his companions reshipped at Portland and then after taking an affectionate leave of Father Nerinckx, their boats were soon again gliding down the Ohio river towards their still distant home on the banks of the Missouri.

As they had no special perils to encounter on the tranquil waters of the lower Ohio their trip from Louisville to Shawneetown was a pleasant one, though perhaps less interesting to the young men, from the fact that it was destitute of any but ordinary incidents. At Shawneetown, situated a short distance below the mouth of the Wabash river, their boat journey terminated. There they disposed of their flat boats, sent their trunks, boxes and other heavy luggage by steamboat to St. Louis, and with their light wagon they crossed the prairies of Southern Illinois to St. Louis, the young men making the entire journey on foot.

Many who traveled by land from Kentucky and other States further east to Missouri in those days crossed the Ohio at Shawneetown, where there was a safe ferry and thence to St. Louis, which was one hundred and forty miles distant, there was a road that was good in fair weather. Our band of missionaries completed this part of their long journey from Baltimore in seven days, but much rain having fallen during the spring, the prairies were quite wet, the water in many places being over their boot tops.

They were much tormented by the unaccustomed song and sting of mosquitoes, which swarm up from the lagoons of Southern Illinois in warm and rainy seasons. They lodged at the farmers' houses, which were at that period "few and far between," and when this was not practicable, they would spread their pallets on the barn floor or in the stable loft.

The travelers reached the Mississippi just opposite St. Louis at one o'clock p. m., on Saturday, May 31, 1823. They were greatly impressed with the grandeur of the "Great River," as the name "Mississippi" signifies, which was then high, the water being level with its banks, while the main channel was covered with huge quantities of driftwood, hurrying onward with the mighty current. Now, after a wearisome journey of just six weeks from White Marsh in Maryland, through the high motives that impelled them, still dominant in their thoughts, it was a goodly sight to gaze upon St. Louis, with which they were to become in some manner identified and upon the mighty river down which the illustrious Marquette was the first to pass this scene, just one hundred and fifty years before that day or in 1673.

In the year 1823 St. Louis was merely a small frontier town of less than five thousand inhabitants. But from having been a village of Upper Louisiana, possessing no definite future promise, it was already giving evidences of new growth and commercial prosperity, especially since the purchase of Missouri by the United States and the advent thither of the busy, restless, contriving and thrifty

Yankee, with the noise of his hammers and the clack of his machinery.

The day after the travelers arrived at St. Louis was Sunday, within the octave of Corpus Christi, and there was a procession of the Blessed Sacrament through the streets with music and firing of cannon. Father Van Quickenborne carried the Blessed Sacrament in the procession. The church was of brick, but it had never been finished. Near the church was the "College Building," in which dwelt five secular priests, who carried on a classical school therein, aided when necessary by some extra teachers.

After the new comers had dined with the hospital priests at the College, Father Van Quickenborne rode his noble roan pacer out to Florissant that evening accompanied by Father Lacroix, who had come in to meet him. As already stated, the Ladies of the Sacred Heart had a house and school at Florissant, which they first occupied near the end of the year 1819. Owing to the fact that the cabins on the farm donated by Bishop Dubourg to the Jesuits about a mile and a half northwest of Florissant were not yet vacated, arrangements were perfected to lodge the new comers in the building used by the Ladies of the Sacred Heart for a day school, till possession of the cabins could be obtained.

A day or two later half of the party went on from St. Louis to join Father Van Quickenborne at Florissant and they were quickly followed by the remainder, all making the journey on foot, and the last ones reaching their destination on June 3d. They stopped midway to rest, eat a luncheon and quench their thirst with the waters of the historic Maligne Creek. During their stay at the village of Florissant in a house which served for school purposes and for their meals in the daytime and for their lodging at night, "the kind Ladies of the Sacred Heart," to use the words of the amiable Father Van Assche, uttered more than fifty years later, "imitated the raven of old, carrying bread to the hermitage of Paul in the desert, with the exception, that they gave food three times a day and not

bread alone, as did the raven to Paul the Hermit, but several things besides, both wholesome and palatable."

Father Van Quickenborne and companions took possession of their farm in June, 1833, Mr. O'Neil, magistrate of Florissant, having moved from it for the purpose, kindly ceding his right to retain it longer, although his lease had not expired. The dwelling given up to them by Squire O'Neal was a log-cabin, containing one room, which was sixteen by eighteen feet in dimensions and over it was a loft, but not high enough for a man to stand erect in it, except when directly under the comb of the roof. This poorly-lighted and ill-ventilated loft or garret was made the dormitory of the seven novices, their beds consisting of pallets spread upon the floor. The room below was divided into two by a curtain, one part being used as a chapel and the other serving as bedroom for Fathers Van Quickenborne and Timmerman. This main room of the cabin had a door on the southeast side or front, a large window on the northwest side without sash or glass, but closed with a heavy board shutter, on the southwest side it had a small window with a few panes of glass, and finally on the northeast side was a notable chimney with a fireplace having a capacity for logs of eight feet in length. At the distance of about eighty feet to the northeast of this dwelling were two smaller cabins, some eight feet apart, one of which was made to serve both as study hall for the novices and as common dining room for the community, the other was used as kitchen and for lodging the negroes. These rude structures were covered with rough boards, held in place by weight poles, the floors were "puncheons," and the doors were of riven slabs and their wooden latches were lifted with strings hanging outside.

Such were the log cabins of the western pioneer, which were now to be the home, the novitiate and seminary of the first Jesuits who came to Missouri. All these priests and novices had been brought up in plenty and comfort in their native land and some of them in affluence, with the accomplishments and refinements of highly cultivated

society. They renounced all in order to become the disciples of Our Lord and teach His saving doctrine to the benighted savages roaming over the prairies of the Far West, and they prepared for this evangelical work by imitating their Master's poverty and humility.

Their journey from Maryland had exhausted their money, and but for the assistance given them by the charitable Madame Duchesne of the Sacred Heart Convent at Florissant, who furnished them food, bedding and various objects most necessary for the household, their condition would have been that of extreme suffering.

No scholastic novices were entered till after the separation of the Missouri Mission from the province of Maryland, which took place by a decree of the General, Father Roothaan, dated September 25, 1830, when the Missouri Mission was made subject immediately to the General of the Jesuit Society. This new arrangement was not actually perfected, however, till the beginning of 1831, or on February 24, of that year, when Father de Theux was installed Superior of the Western Mission.

It was manifest that, before any important work could be undertaken among the Indian tribes, it was necessary first to train and educate the young men, now six in number, for the priesthood. Yet Father Van Quickenborne was of the opinion that, while pursuing their studies, the young men could not only without injury, but even with some advantage to themselves, devote a portion of their time to teaching Indian boys, and since the United States Government had agreed to allow a compensation in money for each Indian boy boarded and taught, this occupation would at the same time increase their scanty means of living.

Accordingly two Indian boys, Aloways, were received from St. Louis in 1824, and a little later three others from the wild tribes in Missouri were placed under their charge by the superintendent of these tribes. In order to provide for a still greater number, Father Van Quickenborne erected a two-story frame building about forty by thirty feet in dimension for the exclusive use of Indian boys.

An arrangement was also made with the Ladies of the Sacred Heart in Florissant to take charge of Indian girls, and thus in the year 1825 two schools were opened for the reception of Indian children, wherein they might learn the principles and the manners of civilized and Christian life. In 1827 there were fourteen Indian children at the seminary for boys and there were about an equal number of Indian girls with the Ladies of the Sacred Heart at Florissant. The majority of these children were half breeds and they belonged to the Cherokee tribe, bands of which still remained around Portage des Sioux and St. Charles.

Messrs. J. B. Smedts and P. J. Verheagen were raised to the priesthood near the beginning of 1825, at the Seminary of the Barrens in Perry County, Missouri, by Bishop Rosati, and in September, 1827, Messrs. P. J. DeSmet, J. F. Van Assche, J. A. Elet and F. S. Verreydt were ordained priests by the same prelate in the church at Florissant. Novitiate, it was decided that Fathers Verreydt and Smedts should reside at St. Charles, where a new stone church, begun in 1825, had just been completed, and from this residence they were to attend Portage des Sioux, Hancock's Prairie, Dardenne and other small stations.

During this year, 1827, Father Van Quickenborne went on his first missionary excursion to the Osage tribe of Indians, beyond the borders of Missouri, and at an estimated distance of five hundred miles from Florissant. He subsequently paid two other visits to this tribe, one in 1829, and the other in 1830, with a view of starting schools and a missionary residence among them. It was not till the spring of 1847, however, that the Jesuits actually began to reside among the Osage Indians. They then founded a school for Indian boys and one for girls, of which the Sisters of Loretto in Kentucky took charge. This mission was established by Rev. John Shoenmaker and Rev. John Bax, with three lay brothers first arriving on the spot on April 29, 1847.

In the year 1827, the Provincial of Maryland, Father Dzierozynski made an official visit to the house near

Florissant; he was most favorably impressed with the prospect of the "Indian Seminary" and the similar school for girls conducted by the ladies of the Sacred Heart at Florissant, and he commended both of them highly to Father Van Quickenborne and in his letter to the General of the Society, Father Fortis. A few of the most respectable families of St. Louis as well as some of the other localities, sent their sons to the Indian Seminary in 1828, for want of any better school accommodations at that period. But both these schools for Indian children had already reached the acme of their prosperity. Despite all their presevering efforts to make these Indian schools a success, there were never more than fourteen children in either of them at one time. As they rather declined than improved after the year 1828, the one for boys was finally closed for good in the year 1830.

Though the special purpose of Father Van Quickenborne and companions in coming to Missouri had been to spend their lives in the work of civilizing and christianizing the Indian tribes dwelling within the Territory, under the spiritual jurisdiction of Bishop Dubourg, yet a few years sufficed to convince them, that no great or permanent results could ever be accomplished among the indolent, wandering and indocile aborigines of the woods and prairie, which would at all compensate for sacrificing all their energies and resources in exclusive attention to these savages. They came to the conclusion, therefore, that more solid and lasting good might be done among the white population than with the well-nigh indomitable red man. It was then they first began to consider the feasibility of establishing a college in St. Louis for higher education, and this project was still more pressed on their attention after the "St. Louis College" conducted by secular priests, had been altogether discontinued in the summer of 1820. It was not then, nor was it subsequently, their intention to give up their original design of having schools and missions among the Indians, but they now came to the conclusion, that works of zeal among the

white population might be even advantageously comprehended within the scope of their aims.

After the Ladies of the Sacred Heart had arranged to commence an academy in St. Louis, where they first went to reside on May 2d, 1827, a desire was generally expressed among the people of the city and throughout the State of Missouri, that the Jesuit Fathers should likewise start a college in St. Louis for the education of young men. Many urged, that the Fathers should not confine their efforts for the welfare of religion and sound education to the Indians, for whom little genuine and enduring good was at all likely to be effected. Bishop Rosati also concurred in this view of the matter and insisted on the expediency of their beginning a college in St. Louis, where he assured them an institution of the kind was much needed and, moreover, the undertaking was sure to prove successful.

These various considerations definitely and finally determined the Jesuit Fathers in 1828, to open a college in St. Louis as soon as the necessary preparations for such a work could be completed. The beneficent gentleman, John Mullanphy, who had donated twenty-five acres of land in the southern limits of St. Louis to the Ladies of the Sacred Heart for an academy, to which he annexed the condition, that they should support perpetually twenty orphan girls, made also an offer of desirable property in St. Louis to Father Van Quickenborne for a college and the proposed gift was coupled with a like condition, but Father Van Quickenborne was not willing to receive property, even as a donation, that was subject to any condition which would bind his successors in office, and which it might afterwards become difficult or odious to fulfill in a college, designed for the higher education.

The Bishop of the diocese made over to the Jesuit Fathers a lot on Ninth street and Christy avenue, which had been given by Jeremiah Connors, then deceased, towards founding a college in St. Louis. The remaining portion of the square west of Ninth street, bounded by Washington

avenue and Christy avenue together with about two-thirds of the next square immediately west, between Tenth and Eleventh streets, was subsequently purchased for the college; the entire premises having a front on Washington avenue of four hundred and seventy-five feet.

The only impediment to their beginning the proposed college in St. Louis at this time was the smallness of their number, for in the year 1828 there were belonging to the Jesuit Mission of Missouri only eight priests and six lay brothers, of whom three were novices. Two of the priests were then residing in St. Charles and the services of the remaining ones were needed for the seminary near Florissant, at the congregation in the village with its annexed stations and for missionary excursions to the Indian tribes, for whose spiritual welfare they were very desirous to provide, since it was principally with a view to such employment they had come to the West.

But despite all discouraging circumstances and difficulties in the way of their new undertaking to promote the interests of education, they finally determined to begin the erection of a building for the college. The foundation was commenced in the autumn of 1828 of a building fifty feet in length by forty feet in width and three stories high besides a basement and attic; it pointed south towards the public road leading out of the town to St. Charles. The site of the college was then surrounded by weedy ponds, groups of sorry oak and suburban farms, the city at that time scarcely extending beyond Third street, the "Rue des Granges" or the Barn street of primitive days. During the session of the "Indian Seminary" near Florissant, 1829-29, there were about fifteen white boys, sons of respectable parents in St. Louis, and some from other localities, who were placed there to be educated. The register of the St. Louis University includes the names of the students who entered the seminary at Florissant, as they were transferred to the college in St. Louis, when it was ready for the reception of students in 1829. The first name was recorded June 12, 1828, and it was "Charles P.

Chouteau, aged eight years.” The records begun at the “Indian Seminary” also contain the names of Francis Cabannee, Julius Cabannee, Du Thil Cabannee, Johan Shannon, William Bolivin, Bryan Mullanphy, Francis Hosseron, Julius Chack, Howard Christy, Alexander La Force Papin, Edmond Paul Chouteau, Thomas Forsythe and Paul A. F. DuBouffay. The building was completed sufficient for use and all preparations were perfected in time to organize classes in the new college on Monday, November 2d, 1829, P. J. DeSmet being appointed Professor.

In the year 1832 it had become necessary for Rev. P. J. DeSmet, on account of protracted ill-health, to withdraw from the Jesuit mission of Missouri and return to his native land, Belgium, for change of air. After reaching his friends and the scene of his youth in Brabant, and East Flanders, he was mindful of his former companions in America; he procured many valuable instruments for the department of physics in the St. Louis University, as also many volumes for the library, and sent them as a donation. They were received on March 7, 1835. Although it was not his expectation when leaving for Europe, ever to see the United States again, yet his health having been completely restored, he returned to Missouri in 1837 and, as is well known, made St. Louis his home during the entire remainder of his extraordinary life. While he was absent in Europe and after his donations were received, the trustees of the University entered on their records the following honorable tribute to him as a benefactor: —

“Whereas, the Board and Faculty of the St. Louis University are highly indebted to the liberality and exertions of the Rev. P. J. DeSmet for the splendid apparatus of physical and chemical instruments received at the University on the 7th of March, 1834.

“Resolved, That besides the special thanks already tendered by the board and faculty of the St. Louis University to said Rev. P. J. DeSmet on receipt of the above mentioned apparatus of physical and chemical instruments, the regis-

ter of the contributions to the Museum of the St. Louis University be opened with a copy of this resolution and his name be placed at the head of the list of contributors to the Museum.

“ P. J. VERHEAGEN.

“ JAMES VAN DE VILDE, Secretary.

“ St. Louis University, Sept. 5, 1836.”

Father DeSmet's donation included also “ a collection of minerals, classified according to the system of Dr. Hany,” as mentioned in the list of contributions. The date of their arrival at St. Louis was not in 1834, but 1835, and they were brought over to America along with the above mentioned instruments by Messrs. M. Oakely and P. Verheagen, who arrived in 1835.

On the 2d of May, 1836, he, in company with Father Verheagen, Eisvogels, Verreydt; Brother Mazzelli and Chaesens set out for the Indian Territory, then embracing the present State of Kansas, Nebraska, those parts of North and South Dakota lying west of the Missouri. Father Verhaegen had made arrangements with the Secretary of War at Washington as to the establishment of an Indian mission among the Pottawotamies, and having succeeded the party reached the present site of Council Bluffs, Iowa, and began their mission among the Indians there. A little chapel in honor of St. Joseph and the Blessed Virgin, twenty-four feet square, surmounted by a modest steeple, soon rose in the wilderness, and beside it a log house for the missionaries. Their field offered a life of crosses, privations, and patience, yet relying on divine grace and the prayers of their brethren, they boldly began their work. The result of the first four months was indeed consoling; many of the Indians showed a great desire for instruction. The missionaries opened a school; their log hut could hold but thirty pupils; it was soon crowded to overflowing. The Indians who left the schools of other missionaries silent, solitary and empty, crowded the log school of the Jesuit to hear the instruction given twice a

day to those who wished for baptism. One hundred and eighty were baptized during the first three months, and even the sick were carried for miles to be enrolled in the flock of the great blackgown. In a letter written in the summer of 1838 (July) to the Lady Superioress of a religious institution of his native place, Father DeSmet says: "I received your letter of March the 13th. All your letters give me great pleasure and much consolation. I do not forget my native place. Continue therefore to send to me the most minute details. You no doubt expect a little recital from the depths of our wilderness. Well, I will exhibit to you the light and the shade. First I must tell you the great loss that we experienced toward the end of April. Our Superior sent us from St. Louis, goods to the amount of \$500, in ornaments for the church, and provisions and clothing for a year. For a long time I had been without shoes, and from Easter we were destitute of supplies. All the Pottawottamie nation were suffering from scarcity, having only acorns and a few wild roots for their whole stock of food. At last, about the 20th of April, they announced to us that the much desired boat was approaching. Already we saw it from the highest of our hills. I procured without delay two carts to go in search of our baggage. I reached there in time to witness a very sad sight. The vessel had struck on a sawyer, was pierced and rapidly sinking in the waves. No lives were lost. Of our effects four articles were saved, a plow, a saw, a pair of boots and some wine. Providence was still favorable to us. With the help of the plow, we were enabled to plant a large field of corn. It was the season for furrowing. We are using the saw to enlarge our church, already too small, and build a better house. With my boots I can walk in the woods and prairies without being bitten by the serpents that throng there. And the wine permits us to offer to God every day the most Holy Sacrifice of the Mass — a privilege that had been denied us for a long time. We, therefore, returned with courage and resignation to the acorns and roots until the 30th of May.

That day another boat arrived. By that same steamer I received news from you, as well as a letter from my family, and from the good Carmelite Superior.

“Our congregation already amounts to about three hundred. At Easter we had fifty candidates for holy communion. I recommend to your prayer in a very special manner, these poor Indians, that they may retain their fervor. The dangers and scandals which surround them are very numerous. I remarked, in a preceding letter, that one of the principal obstacles to the conversion of the Indians is drinking. The last boat brought them a quantity of liquors. Already fourteen of them are dead from the effects of liquor; a father seized his own child by the legs and crushed it in presence of its mother, by dashing it against a post in his lodge. Two others most cruelly murdered an Indian woman, a neighbor of ours and the mother of four children. We live in the midst of most disgusting scenes. The passion of the savages for strong drink is inconceivable. They give horses, blankets, all, in a word, to have a little of this brutalizing liquid. Their drunkenness only ceases when they have nothing more to drink. Some of our neophytes have not been able to resist this terrible torrent, and have allowed themselves to be drawn into it. I wrote a letter to the Government against these abominable traffickers. Join your prayers to our efforts to obtain from heaven the cessation of this frightful commerce, which is in every way the curse of the savages.

“I visit the Indians in their wigwams, either as missionary, if they are disposed to listen to me, or as physician, to see their sick.”

Returning to St. Louis in the Fall he stayed there during the winter.

DE SMET'S WORK AMONG THE INDIANS.

In 1831 the Flatheads held their annual reunion on the Bitter Root river. They sent a deputation to St. Louis to obtain a blackgown, because having been in contact with French trappers for many years they had heard of the

truth which the "blackgown" preaches. The deputation did not reach St. Louis. Most of the envoys fell victims to disease, and left their bones to bleach on the trail in the wilderness.

Undaunted by the first failure, the fervent tribe sent a new delegation, which happily reached St. Louis; but the Bishop was so destitute of priests, that he could only promise to meet their want at the earliest moment. Buoyed up by this promise, they lived on in hope. But when they encamped in 1837 and no "blackgown" had yet appeared, they once more chose an embassy, but were destined to new disappointment; the five who composed it were massacred by the Sioux.

Yet still the Flatheads persevered. In 1839, they sent two Iroquois deputies, Peter and Ignatius, who reached St. Louis early in winter. They asked Bishop Doubourg for a blackgown. The Bishop referred them to the Jesuits, because the second Provincial Council of Baltimore, Maryland, had confided the Indians of the northwest to the Jesuits. The provincial lived at the St. Louis University and the Indians went to him; but so unexpected was the visit that he felt embarrassed. Father DeSmet, however, who was then a professor at that institute, begged to be permitted to labor for the salvation of these poor creatures. When the expenses were mentioned as an obstacle, the great-hearted missionary destroyed the objection by exclaiming: "I will get means from my home, my friends; only let me go to the rescue of these poor Indians, and assuredly sufficient means will come from Europe." His wish was granted and on the 30th of April, 1840, he left St. Louis to commence his life-work — the conversion of the red men of the Northwest.

In a letter written on the 4th of February, 1841, Father DeSmet says: "In the beginning of last spring I was sent by the Right Rev. Bishop of St. Louis, and my provincial, on an exploring expedition to the Rocky Mountains, in order to ascertain the disposition of the Indians, and the prospect of success we might have if we were to establish

a mission among them. It is truly gratifying to me to have so favorable a report to make. My occupations do not allow me to enter into all the details. I shall therefore be satisfied at present with giving you a brief sketch of my journey and its result.

“ I started from Westpoint on the 30th of April (1840), in company with the annual expedition of the American Fur Company, which for this year had appointed the rendezvous on Green River, a tributary to the Rio Colorado of the West. Captain Dripps, who commanded the caravan, treated me on all occasions with the most polite attention. On the 6th day of our journey I was seized with the fever and ague, and have been subject to it for nearly five months. Nothing particularly worth noticing occurred during the journey, except when we halted in the village of Sheyennes during the month of June. I was introduced to the Chiefs as a minister of the Great Spirit; they showed me great deference, and I was invited to a feast. I had to pass at first through all the ceremonies of the calumet. The great Chief approached me to shake hands, and gave me a heartfelt ‘How do you do, blackgown,’ said he, ‘my heart was filled with joy when I learned who you were. My lodge never received a visitor for whom I feel a greater esteem. As soon as I was apprised of your coming, I ordered my great kettle to be filled, and in your honor, I commanded that my three fattest dogs should be served up.’ The bravest warriors of the nation partook of the repast, and I availed myself of the opportunity to explain to them the most important tenets of Christianity. I told them the object of my visit, and inquired whether they would not be satisfied to have a blackgown among them, who would teach them to love and serve the Great Spirit as he wished. ‘Oh, yes,’ they eagerly answered, ‘we will gladly provide for every thing he need, he will not die of hunger among us.’ I have no doubt but a zealous missionary would do a great deal of good among them.

They are about two thousand in number. Their language, it is said, is very difficult. On the 30th of June,

we arrived at the rendezvous. An escort of warriors had been provided for me by the Flatheads. Our meeting was that of children who come to meet their parent, and in the



A COMANCHE WARRIOR.

effusion of their hearts, they bestowed upon me the fondest names with a simplicity truly patriarchal. They told me of all the interesting particulars of their nation, and of the

wonderful preservation of sixty of their men, in a battle against two hundred Blackfeet, which lasted five whole days, and in which they killed fifty of their enemies, without losing a single man of their number. The Great Spirit watched over them; they said, ‘he knew that we were to guide you to our camp, and he wanted to clear the road of all the obstacles that you might have found on your way. We trust we will not be annoyed any more by the Blackfeet; they went off weeping like women. We thanked heaven for the signal preservation, and implored its assistance for the new and perilous journey we were on the point of undertaking.’

“The Indians of different nations and the trappers had assembled on the rendezvous in great numbers, for the sake of the trade. On Sunday, the 5th of July, I had the consolation of celebrating the holy sacrifice of mass *sub dio* (in the open air). The altar was placed on an elevation, and surrounded with boughs and garlands of flowers; I addressed the congregation in French and in English, and spoke also by an interpreter to the Flat-head and Snake Indians. It was a spectacle truly moving for the heart of a missionary, to behold an assembly composed of so many different nations, who all assisted at our holy mysteries with great satisfaction. The Canadians sung hymns in French and Latin, and the Indians in their native tongue. It was truly a Catholic worship. This place has been called since that time, by the French Canadians, *la prairie de la Messe*.

“About thirty of the Snake Indians invited me to a council. I explained to them the Christian doctrine in a compendious manner — they were all very attentive — they then deliberated among themselves for about half an hour; and one of the chiefs, addressing me in the name of the others, said: ‘Blackgown, the words of thy mouth have found their way to our hearts; they never will be forgotten. Our country is open to thee; come, teach us what we have to do, to please the Great Spirit, and we will do according to thy words.’ I advised them to select

among themselves a wise and prudent man, who every morning and evening, should assemble them to offer to Almighty God their prayers and supplication; that there the good chiefs should have an opportunity of exhorting their warriors to behave as they ought. The meeting was held the very same evening and the great chief promulgated a law, that for the future, the one who would be guilty of theft, or of any disorderly act, should receive a public castigation.

“On Monday, the 6th, we proceeded on our journey. A dozen Canadians wished to accompany me, to have an opportunity, as they said, to practice their religion. Eight days afterwards we arrived at our destination, the camp of the Flatheads, and Ponderas, or Pends d’oreilles. Immediately the whole village was in commotion; men, women and children all came to meet me, and shake hands, and I was conducted in triumph to the lodge of the great chief Tjolizbitzay, the Big-face. He had the appearance of a patriarch. Surrounded by the principal chiefs of the two tribes, and the most renowned warriors, he thus addressed me: ‘This day Kaikolinzosten (the Great Spirit) has accomplished our wishes, and our hearts are swelled with joy. Our desire to be instructed was so great, that three times had we deputed our people to the Great Blackgown (the Bishop), in St. Louis, to obtain a Father. Now, Father, speak, and we will comply with all what you tell us. Show us the road we have to follow, to come to the place where the Great Spirit resides.’ Then he resigned his authority to me; but I replied that he mistook the object of my coming among them; that I had no other object in view, but their spiritual welfare; that with respect to temporal affairs, they should remain as they were, till circumstances should allow them to settle in a permanent spot.

“Afterwards we deliberated on the hours proper for their spiritual exercises and instructions. One of the chiefs brought me a bell with which I might give the signal. The same evening about two thousand people were assem-

bled before my lodge to recite night prayers in common. I told them the result of my interview with the chiefs; of the plan of instruction which I intended to pursue; and with what disposition they ought to assist at them, etc. Night prayers having been said a solemn canticle of praise of their own composition, was sung by these children of the mountains, to the author of their being. It would be impossible for me to describe the emotions I felt at this moment; I wept for joy, and admired the marvelous ways of that kind Providence who, in his infinite mercy, had deigned to depute me to this poor people, to announce to them the glad tidings of salvation.

“The next day I assembled the council, and with the assistance of an intelligent interpreter, I translated into their language the Lord’s Prayer, the Hail Mary, the Apostles Creed, the Ten Commandments, and four Acts. As I was in the habit of reciting these prayers, morning and evening, and before instruction, about a fortnight after, I promised a beautiful silver medal to the one who would recite them first. One of the chiefs rising immediately, ‘Father,’ said he, smiling, ‘that medal is mine,’ and he recited all the prayers without missing a word. I embraced him, praised the eagerness which he had evinced of being instructed, and appointed him my catechist. This good Indian set to work with so much zeal and perseverance, that in less than a fortnight all knew their prayers.

“Every morning at the break of day, the old chief is the first on horseback, and goes around the camp from lodge to lodge. ‘Now, my children,’ he exclaims, ‘it is time to rise; let the first thoughts of your hearts be for the Great Spirit; say that you love him, and beg of him to be merciful to you. Make haste, our Father will soon ring the bell, open your ears to listen, and your hearts to receive the words of his mouth.’ Then, if he has perceived any disorderly act on the preceding day, or if he has received unfavorable reports from the other chiefs, he gives them a fatherly admonition. Who would not think,

that this could only be found in a well ordered and religious community, and yet it is among Indians in the defiles and valleys of the Rocky Mountains.

“ You have no idea of the eagerness they showed to receive religious instruction. I explained the Christian doctrine four times a day, and nevertheless my lodge was filled the whole day with people eager to hear more. At night I related those histories of Holy Scriptures that were best calculated to promote their piety and edification, and as I happened to observe that I was afraid of tiring them, ‘ Oh, no,’ they replied, ‘ if we were not afraid of tiring you, we would gladly spend here the whole night.’ I conferred the holy Sacrament of Baptism on six hundred of them, and if I thought it prudent to postpone the baptism of others till my return, it was not for want of desire on their part, but chiefly to impress upon their minds a greater idea of the holiness of the sacrament, and of the dispositions that are required to receive it worthily. Among those baptized were the two great chiefs of the Flatheads and Ponderas. As I excited the Catechumons to a heartfelt contrition of their sins, the Walking Bear, Chief of the Pondera, answered: ‘ Father, I have been plunged for a number of years in profound ignorance of good and evil, and no doubt, during that time, I have often greatly displeased the Great Spirit, and therefore I most humbly beseech his pardon. But when I afterward conceived that a thing was bad, I banished it from my heart, and I do not recollect to have since deliberately offended the Great Spirit.’

“ Truly where such dispositions are found, we may well conclude that a rich harvest is to be gathered.

“ I remained two months among these good people, and every day they were adding to my consolation, by their fervor in prayer, by their assiduity in coming to my instructions and by their docility in putting into practice what they had been taught. The season being far advanced, and as I had waited in vain for a safe opportunity to return to St. Louis, I resolved to commit myself to Providence,

and on the 7th of August, I took leave of my dear neophytes. I appointed one of the chiefs to replace me during my absence, who should preside in their morning and evening prayers, and on Sunday exhort them to virtue, baptize the little children, and those who were dangerously ill.

“ Grief was depicted on the features of all, and tears were glistening in their eyes. The old chief addressed me, saying: ‘ Father, the Great Spirit accompany thee in thy long and dangerous voyage; every day, morning and evening, we will address to him our humble supplication that thou mayest arrive safely among thy brethren. And we will continue to do so till thou art again among the children of the mountains. We are like the trees that have been spoiled of their verdure by the winter’s blast. When the snow will have disappeared from these valleys, and the grass begins to grow, our hearts will begin to rejoice; when the plants will spring forth our joy will increase; when they blossom, it will still be greater, and then we will set out to meet you. Farewell, Father, farewell.’

“ The chiefs would not suffer me to depart by myself; thirty of the braves were deputed as a safeguard to traverse the country of the Blackfeet, who are very hostile to the whites, and they were instructed to accompany me, as far as need would be of their assistance. I resolved to take on my return a route different from the one I had taken in coming. I was induced to do so, in order to visit the forts of the American Fur Company on the Missouri and on the Yellowstone river, and to baptize the children. After five or six days traveling we fell in with a war party of the Crow Indians, who received us very kindly, and we traveled together for two days. Then we directed our course to the Big Horn, the most considerable of the streams tributary to the Yellowstone. There we met another party of the same nation, who were also amicably disposed towards us. As there was question about religion, I availed myself of the opportunity to explain to them the main articles of the Christian faith, and as I was depicting in lively colors the torments of hell, and had told them that the Great Spirit

had kindled this fire of his wrath, for those who did not keep the commandments I had explained to them, one of the chiefs uttered a horrid shriek. 'If this be the case,' said he, 'then I believe there are but two in the whole nation who will not go to that place; it is the Beaver and the Mink; they are the only Crows that never stole, who never killed nor committed all the excesses which your law prohibits. Perhaps I am deceived and then we must all go together.'

"When I left them the next day the chief put a fine bell on my horse's neck, and invited me to take a turn around the village. Next he accompanied me for six miles. After several days of a painful journey over rocks and cliffs, we arrived at last at the fort of the Crows. It is the first the American Fur Company possessed in that territory. My dear Flatheads edified all by their fervor and their piety. As well in the fort as on the road, we never missed performing in common our morning and evening prayer, and singing canticles in honor of the Almighty. Frequently during my stay with them, they have given me abundant proof of their trust in Providence.

"I cannot forbear mentioning one instance that occurred during my travel in this place. One day as dinner was preparing and provisions scarce, a countryman of mine, who accompanied me, suggested the propriety of keeping something in reserve for supper. 'Be not uneasy,' said the chief, called Ensyla, 'I never missed my supper in my life. I trust in the mercy of the Great Spirit; he will provide for all our wants.' We had just camped at night, when the chief killed two stags. 'Did I not tell you right,' he remarked smilingly to my companion. 'You see the Great Spirit does not only provide for our wants of this evening, but he gives us also a supply for to-morrow.'

"Now began the most difficult and most perilous part of our journey. I had to pass through a country supposed to be overrun by war parties of the Blackfeet, Assineboins, Gros Ventres, Arikaras and Sioux. All these nations entertained the most hostile disposition toward the Flat-

heads. I therefore dispensed with their service any farther. I again excited them to continue the good work they had begun; to be steadfast in their faith; regular in their devotion; charitable toward one another. I embraced them all and took my leave. Mr. John de Velder, a native of Ghent in Belgium, had volunteered his services to me at the rendezvous. In consideration of the bad state of my health, I deemed myself very happy to accept of them; he has never left me since. He was now to be my only traveling companion. As there is no road, we followed the direction of the river; at intervals we were obliged to make immense circuits to avoid the steep and raggy hills that defied our passage. For two hundred miles we had continually death before our eyes. On the second day I discovered before daylight a large smoke at a distance of a quarter of a mile. We hastily saddled our horses and gained a high bluff unperceived. At night we did not dare to make fire for fear of attracting notice. Again about dinner time we found in the road the carcass of a buffalo killed only two hours before; the tongue with the marrow bones and some other dainty pieces had been taken away. Thus the kind providence of our God took care to supply our wants.

“ We took a direction contrary to the tracks of the Indians, and spent a safe night in the cliffs of the rocks. The next day we struck upon a spot where forty lodges had been encamped; the fires were yet in full blaze. Finally we crossed the Missouri, at the same place where, only an hour before, a hundred lodges of ill-minded Assinboins had passed, and we arrived safe and unmolested at Fort Union, situated a few miles above the mouth of the Yellowstone. In all these forts great harmony and union prevail; Mr. Kipps, the present administrator of them, is a gentleman well worthy of his station. Everywhere I was treated by these gentlemen with the greatest politeness and kindness, and all my wants were liberally supplied.

“ As I was relating the particulars of that dangerous trip to an Indian chief, he answered: ‘ The Great Spirit has



SANDERS-DO ST. LOUIS

MRS. CANTSON AND OXEN TEAM.

his Manitous; he has sent them to take care of your steps and to trouble the enemies that would have been a nuisance to you.' A Christian would have said: 'He has given His angels charge over thee, that they guard thee in all thy ways.'

"On the 28th of September, we set out for the village of the Mandans, in company with the three men of the fort, who had the same destination. We met on the road a party of nineteen Assineboins, who were returning to their country from an unsuccessful expedition against the Gros-Ventres. Their looks indicated their bad intentions; although we were but five in number, we showed a determined countenance, and we passed unmolested. Next day we crossed a forest, the winter quarters of the Gros-Ventres and Arikaras in 1835. It was there that those unfortunate tribes were nearly exterminated by the small-pox. We saw their bodies wrapped up in buffalo robes, tied to the branches of the largest trees. It was truly a sad and mournful spectacle.

"Two days later we met the miserable survivors of these unhappy tribes. Only ten families of the Mandans, once such a powerful nation, now remain. They have united with Gros-Ventres and Arikaras. They received me with great demonstration of friendship; I spent that night in their camp, and the next day crossed the Missouri in a canoe made of a buffalo skin.

"The next day we came to the first village of the Arikaras, and on the following day to their great village, consisting of about a hundred earthen wigwams. This tribe also received me very kindly.

"On the 6th of October we started from the Mandan village for Fort Pierre on the Missouri; a Canadian whose destination lay in the same direction accompanied us. The commander of the fort had recommended us to be especially on our guard against the Jantonnois, the Santees, Jantons, Ankepateness, Ampapas, Ogallalas and Blackfeet Sioux, who have often proved very troublesome to white strangers.

“On the third day of our journey we fell in with an ambuscade of the Jantonnois and Santees; they did not do us any harm, but on the contrary treated us very kindly, and at our departure loaded us with provisions. The next day we fell in with several other parties who showed us great kindness.

“On the ninth day we were in the land of the Blackfeet Sioux; this country is undulating and intersected with numberless little streams. For greater caution we traveled in ravines. Toward dinner time a fine landscape, near a delicious spring, seemed to invite us to take some repose. We had scarcely alighted when all on a sudden a tremendous yell alarmed us, and from the top of the hill under which we were, the Blackfeet darted upon us like lightning. ‘Why do you hide yourselves?’ asked the chief in a stern voice. ‘Are you afraid of us?’ Dressed in my cassock with a crucifix on my breast, a costume I always wear in the Indian country, it appeared to me that I was the object of this particular inquiry. He asked the Canadian what kind of a man I was. The Frenchman said that I was a chief, a blackgown, the man that spoke to the Great Spirit. He assumed immediately a milder countenance, ordered his men to lay down their arms, and we performed the ceremony of shaking hands and smoking the calumet of peace. He then invited me to accompany them to the village, situated only at a short distance. It consisted of about a thousand souls. I pitched my tent at some distance, in a beautiful pasture, on the margin of a fine stream, and invited the great chief to take supper with me. As I said grace before meal, he inquired of the Canadian what I was about. ‘He is addressing the Great Spirit,’ was the reply, ‘in gratitude for the food he has granted us.’ The chief nodded a sign of approbation.

“Shortly after twelve warriors, in full costume, stretched a large buffalo robe before the place where I sat. The chief taking me by the arm, invited me to sit down. I was under the impression that there was question again of smoking the calumet. Judge of my astonish-

ment, when the twelve warriors, seizing each a piece of the robe, took me up, and headed by their chief, carried me in triumph to their village. In the lodge of the great chief the most conspicuous place was assigned me, and he addressed me thus: ‘This day is the happiest day of my life. For the first time do we behold among us a man who is so closely united with the Great Spirit. Black-gown, you see before you the chief warriors of my tribe; I have invited them to this feast, in order that they may keep the remembrance of your coming among us as long as they live.’ Then he invited me to speak again to the Great Spirit (to say grace). I began in the name of the Father, the Son and the Holy Ghost, etc., and immediately all present lifted up their hands towards heaven; when I had concluded they all struck the ground. I asked the chief what they meant by this ceremony. ‘When we lift up our hands,’ said he, ‘we signify that all our dependence is on the Great Spirit, and that he in his fatherly care provides for all our wants; we strike the ground to signify that we are only worms and miserable creeping beings in his sight.’ He asked me in his turn, what I had told the Great Spirit. Unhappily the Canadian was a poor interpreter, still I endeavored to make them understand, as well as I could, the Lord’s Prayer. The chief showed great eagerness to know what I said. He ordered his son and two other intelligent young men to accompany me to the fort, in order to learn the principles of the Christian doctrine, and to be at the same time a safeguard against the Indians that might be inimically disposed towards us.

“Two days afterwards we met an Indian, whose horse was bending under a load of buffalo meat. Seeing us without provisions, he requested us to accept what might be of benefit to us, advising us to take the whole, for, said he, in the vicinity of the fort, game is very scarce.

“Fivedays afterwards we arrived at Fort Pierre. Thence I traveled through prairies for nineteen days successively. We were often obliged to cook our meals with dried herbs;

not a stick was to be found. When I arrived at Fort Vermillion, I was apprised that the Santees had been on a warlike expedition against the Pottawattomies, of the Council Bluffs, among whom I had labored the two preceding years. I invited them to a council, and gave them a severe reprimand for violating the solemn promise which they had made the year before to me, of living with their neighbors on amicable terms. I showed them the injustice of attacking a peaceable nation without being provoked; the dreadful consequence of the Pottawattomies' revenge, that might end in extinction of their tribe. I was requested to be once more the mediator, and they told me that they had resolved to bury the tomahawk forever. I had lost two horses on the road; the one I was riding could hardly support me any longer, and I was yet three hundred miles distant from Council Bluffs. I resolved of course to embark on the Missouri, and engaged a native Iroquois to be my pilot. At first we were favored with fine weather, but this lasted only a few days. Very soon inclement weather set in with frost and snow; and several times as we drifted down the rapid stream, our frail canoe was on the point of being dashed to pieces against the numberless snags that obstruct the navigation. This dangerous trip lasted ten days. We generally spent the night on a sandbar. We had only a few frozen potatoes left when we perceived a beautiful deer gazing at us, and apparently waiting to receive its mortal blow. We shot at it. At last we arrived safe at the Bluffs, and on the same day the river was closed by ice.

“ So many escapes from the midst of so many dangers thoroughly convinced me that this undertaking is the work of God, who reached from end to end mightily, and ordered all things sweetly. I am now preparing for my return, and will start early in the spring, accompanied by three Fathers and as many Brothers. You are aware such expeditions cannot be undertaken without the necessary means, and the fact is, I have no other reliance but providence and the kindness of friends. I hope they will not be

wanting. I know that you must feel deeply interested in this meritorious good work, I therefore take the liberty of recommending it to your generosity, and that of your friends; every little contribution will help. I will be very graceful to you, if you have the kindness to forward to my address at St. Louis University, Mo., before the end of March, or middle of April, the amount you have collected. I recommend myself and my dear neophytes to your good prayers and holy sacrifices, and rest assured that we shall not forget our benefactors.

P. J. DESMET."

CHAPTER II.

FATHER DE SMET AGAIN AMONG THE SIOUX.

In the spring of 1841 Father DeSmet again set out with Father Nicolaus Point, a Vendean, Father Gregory Mengarini, a Roman, and three lay brothers, all expert mechanics. Leaving Westport on the last day of April, they passed the friendly Kansas, who still remembered the visits of La Croix, the Cheyennes, the treacherous Banacs on the Platte, then the less reliable Pawnees, and at last on the 15th of August, met at Fort Hall the Flathead escort, who had come eight hundred miles to join the missionaries. Father DeSmet went on to Oregon and traveled among the Flatheads, Coeurs d'Alenes, Kalispels, Koetenays, Nez-Perces or Pierced Noses, Shuyelpis, Okoetenays and other Indian tribes, to whom he preached the Gospel and baptized 1654 of them.

He returned to St. Louis after spending one year among these Indians and gave an account of his work. His Provincial directed him to Europe to make further Provisions for the conversion of the Indian tribes and their civilization. In Europe DeSmet excited the greatest enthusiasm in behalf of his work.

Having obtained considerable relief, he on the 12th of December, 1843, sailed from Antwerp with Fathers Ver-cruysse, Accolti, Ravalli, Nobili, a lay brother and six sisters of the Congregation of our Lady, and after a long and dangerous voyage, arrived at Fort Vancouver, on the 15th of August, 1844. He remained among the Indians till 1847, and on his return from the Rocky Mountains took a road which led him through the Southern Hills, following the Fort Laramie and White River trail.

In the spring of 1848 he again set out for his distant mission and took a road which led him through the Black Hills.

The country between the Missouri and the Black Hills, taking the route along the northern boundary line of Nebraska, is described by Father DeSmet in a letter to the members of the Central Councils of Lyons and Paris, France.

“UNIVERSITY OF ST. LOUIS, June 1, 1849.

“GENTLEMEN:—

“A transient visit to some tribes of the Sioux, on the Upper Missouri, on my way back from the Rocky Mountains, left in me an ardent desire to see those poor Indians again. I was anxious to judge more maturely of their disposition, and ascertain with greater certainty what hopes might be entertained from the establishment of a mission among them. During the course of last summer, my superiors granted me this truly consoling privilege. In order to reach their villages, I was obliged to ascend the Missouri as far as Bellevue (a village situated in the territory of the Ottos, 610 miles from St. Louis) and then pursue my journey on horseback, over immense prairies, for about twenty-five days.

“An excursion through the magnificent plains of the Great American Desert, and, above all, in the vicinity of this noble river, which descends in innumerable torrents from the Rocky Mountains, offers undoubtedly many charms, and might afford material for description replete with interest; but it would be a theme on which I had predecessors,

and, moreover, it would be giving the letters which I have the honor to address to you an extent quite beyond what I dare assume.

“ I will content myself with a sketch by M. Nicollet, my own experience enabling me to appreciate the exact fidelity of his picture: ‘ Consider the boundless extent of a prairie—scan one by one its undulations, and, borne as it were from wave to wave, from valley to hill-top, find yourself in presence of the limitless plain which is spread out before you; journey onward—hours, days, and weeks will succeed each other, and emotions of ever-varying delight will captivate the mind, while the spectacle of inexhaustible wealth and new beauties will fascinate the eye. Without doubt there will be moments in which the ardors of a burning sun, and the privation of pure water capable of allaying thirst, will force you to remember that the best of earthly joys have their hidden thorns; but these trials are rare and brief. A gentle breeze almost continually refreshes the atmosphere in these vast plains, and the surface is so uniform as to baffle a surprise for the most crafty enemy. The route is one field of verdure, enameled with odoriferous wild flowers, whose brilliant beauty has no witness but the azure firmament. It is particularly during summer that the aspect of the prairie breathes gayety, grace, and life, and if there be any one moment in which they may excite all the sympathies of the traveler, it is when an Indian hunter, in pursuit of the deer or bison, animates this immense solitude with his presence and motions. I pity the man whose heart remains unaffected before so ravishing a spectacle.’

“ My land journey commenced at Bellevue, nine miles beyond the Nebraska or Platte river, thence to the mouth of the Niobrara or Eau-qui-court, ten days’ march. We met not a single Indian, and no vestige of human habitation greeted the eye. But ever and anon we distinguished small artificial mounds erected by the hand of man; irregular heaps of stones, and tombs containing the mortal remains of Indians, carefully wrapped up in buffalo robes.

At times a solitary post marked the spot where some brave had fallen in the field of battle — where reposed perhaps some ancient Nestor of the desert. These monuments, though with no epitaph to attest lofty deeds or transmit names to posterity, are a tribute of a feeling heart, a mute testimony of the respect the Indian bears to the memory of a father or of a friend, and of the value he attaches to the glory of his ancestors. Some herds of bison and dense flocks of deer, of several species, that fled at our approach, alone beguiled the tedium of the march.

“It is customary to encamp in places where the grass is fresh, which is generally on the border of a stream or a pond of clear water. Care must also be taken for the safety of the horses during the night. To prevent all accident, they are hobbled — enfarge, as the Canadian voyageurs say — that is the two forelegs are tied together, so as to prevent their straying too far from the camp. Two or three men remain on guard against any accident or surprise from the Indians, too justly renowned as the most expert of horse-thieves. These sentinels also protect us against the bears and wolves which infest the wilderness, and incessantly prowl in the neighborhood of camps. Horses on perceiving them, take fright and fly unless the necessary precaution has been taken, and it sometimes happens that the most careful measure proves futile.

“Thus we, one day, lost a superb stallion of great value. Every evening he was tied to a post, with a long and heavy halter, but in a fright, caused by the approach of wolves, he darted forward with such velocity after the other horses as they rushed by him, that on reaching the end of his halter he broke his neck.

“In so long a march, through regions so singularly various, two great inconveniences are sometimes experienced — want of water and of wood. More than once we had no other fuel but the dry bison-dung, and three times at our camping ground water failed us. This is a hard trial for men and horses, especially after traveling all day under the burning sun of the month of August.

“ Another kind of torment, still less supportable when the heat is intense, is the appearance of fantastical rivers and lakes on the verge of the horizon, seeming to invite the weary traveler to advance and refresh his wasted strength upon their banks. Fatigue and thirst picture in the distance verdure, shade and coolness awaiting him. The illusion increases the desire of quenching your burning thirst. You hasten onward to reach the goal. Hour succeeds hour; the deceitful mirage heightens in brilliancy, and the panting exhausted traveler presses on without a suspicion that the phantom flies before him. In an open, elevated region, where the atmosphere is in continual agitation, this effect may be easily produced by the reverberation of the suns rays from the surface of these vast prairies, throwing the various tints of the verdure upon the deep blue of the firmament.

“ Besides the difficulties arising from the nature of the ground, there are others which summer always brings with its myriads of insects. Among these the most to be dreaded is the gad-fly, the sting of which will make the gentlest horse bound with rage. Happily for the horse in these plains, Providence has bestowed upon him a defender as skillful as devoted,—the starling, unalarmed by the presence of man — which, wheeling ever about the rider, lights on the back of the horse or on his load, to dart with wonderful skill upon the malicious insect which is about to attack his traveling companion.

“ For ourselves we are obliged to wage continual war upon the swarms of mosquitoes, and their allies, the gnats. The latter teased us by day, the former, more cowardly, attacked us by night. These famished enemies, the product of stagnant waters and decaying plants, at the approach of a convoy, rush from their infected abodes, and accompany it, with their plaintive buzzing, to the spot where the traveler seeks in vain a brief repose after the heat and hardships of the day. The winged tribe at once sound the trumpet of war and darting on their tired victim, sting, harass, and pursue him until they have assuaged their

sanguinary fury, and obliged the unfortunate traveler, already sweltering with heat, to seek a stifling shelter under a buffalo robe or a thick blanket.

“One day I found myself the object of attack of a swarm of winged ants. They came upon me with such furious impetuosity, that in a few seconds I was totally covered. Then I waved my handkerchief about my head, and soon got my horse to leave far behind me this phalanx of black insects, which filled a space of about a quarter of a mile.

“To those who pass their days amid the quiet of domestic joys, surrounded by all the delicacies that abundance can produce, a journey through the prairies may appear a sad realization of human misery and suffering; but to the man that elevates his thoughts above earthly and passing things, in order to devote himself to many unfortunate souls who will love and serve the true God when they know him, such an one can perceive in these privations, in even greater perils and difficulties which may be encountered, only slight annoyances, which he will prefer to all the delights of indolence or the dangers of wealth. He has meditated the sublime words of our Lord: ‘The kingdom of heaven suffers violence and the violent bear it away,’ he recollects that a God became man — ‘although he was without sin bore the weight.’ His sufferings finally teach him, that it is through tribulation and sacrifices that he can enter the kingdom of heaven, and conduct thereto those who may desire to range themselves and die beneath the banner of the Cross.”

In a letter written on the following day (June 3d) Father DeSmet continues his story:—

“In my last letter I spoke of the annoyance resulting from the continual attacks and buzzing of the mosquitoes and brulots. I must add to this harsh music the more fearful and more disagreeable noise of the rattlesnake. These reptiles are frequently met with in the region called Mauvais Terres, a very remarkable plateau, of which I

will hereafter give a description. Here also are found the many-hued chameleon, the hideous lizard, the horned frog, known by the perhaps more classical name of salamander, and several varieties of small tortoise. I witnessed a singular trait of the instinct of a rattlesnake. The reptile was basking in the sun, surrounded by eight or ten little ones. As soon as she perceived me, she gave the rattle, opened her throat wide, and in an instant the whole brood descended; I withdrew some seconds, and then returned; the young ones had come forth from their living tomb, to which my presence quickly obliged them to seek refuge anew. The unbroken, arid soil of the Bad Lands boasts of several millions of townships, full of life and movement — I mean the villages of the prairie dog — the site of each one of which extends over an area of several square miles of smooth table land, on which the grass is very short and thin. The instincts of this remarkable animal (which bears some resemblance to the squirrel) are at once curious and amusing. The grass which springs up in the neighborhood of their dwellings they tear up by the roots; but their vandalism has its exceptions. They seem to respect certain flowers which generally surround their little abodes, and give them a much more agreeable look. These proved to be the *Heleoma hirta*, the *Solanom triflorum*, the *Lupinus pusillus*, the *Erigeron divaricatum*, *Dysodia chrysanthemoides*, *Ellisia nyctagena*, and the *Panicum virgatum*.

“They pile up the earth around their dwellings about two feet above the surface of the soil, thus protecting themselves against the inundations which, in the rainy seasons or at the melting of the snows, would engulf them and their little hopes. Guided by instinctive foresight, they carefully gather together all the straws which are scattered over the plain, and carry them into their subterranean asylums, to protect them against the rigors of the winter. At the approach of a horseman, alarm is rapidly communicated to all the citizens of the singular republic. All quit their habitations, and with head erect, the ears pricked up with anxiety, and a troubled stare, remain

standing at the entrance of their abodes, or at the openings of their conical hills. After a momentary silence, they break forth into one loud and repeated chorus of shrill barking. For some minutes life, motion, and restless agitation reign throughout the extensive field they occupy; but at the first gunshot, all is tranquil, every animal disappearing like a flash. A kind of small owl, and the rattlesnake, appear to entertain amicable relations with the prairie dog—and are commonly found at the entrance of their lodges, and in the general fright, the three seek safety in the same asylum. The motives and nature of this singular sympathy are unknown. The wolf and the fox are their greatest enemies.

“ The Indian word Mankizita-Watpa, commonly translated White-Earth River, signifies, more literally, Smoking Land River; and in this region there are incontestable and numerous indications that subterraneous and volcanic fires have passed there. The water of the river is strongly impregnated with a whitish slime. We encamped on its shore. A heavy rain had recently washed all the ravines and dry beds of the rivulets and torrents, which are abundant throughout the Bad Lands, consequently the water was very similar to thin mud. What was to be done? We must either use this water to prepare our evening repast, or retire without tea or broth. This is no easy sacrifice in the desert after riding on horseback for ten or twelve hours in the scorching sun. After many fruitless efforts to purify the water, we were obliged to use it as it was. Hunger and thirst made us less dainty. The mixture of mud, tea and sugar, was, after all, palatable to our famished stomachs. On the morrow we traveled all day, and found a delicious spring where we camped at night.

“ The Mauvais Terres, — Bad Lands, — in the portions which are traversed by the Mankizita-Watpa, are the most extraordinary of any I have met in my journeys through the wilderness. The actions of the rains, snows and winds upon the argillaceous soil is scarcely credible; and the combined influence of these elements renders it the theater

of most singular scenery. Viewed at a distance, these lands exhibit the appearance of extensive villages and ancient castles, but under forms so extraordinary, and so capricious a style of architecture, that we might consider them as appertaining to some new world, or ages far remote. Here a majestic gothic tower, surrounded with turrets, rises in noble grandeur, and there enormous and lofty columns seem reared to support the vault of heaven.

“Further on, you may deery a fort beaten by the tempest, and surrounded by mantellated walls; its hoary parapets appear to have endured, during many successive ages, the assault of tempest, earthquakes, and thunder. Cupolas of colossal proportions, and pyramids which recall the gigantic labors of ancient Egypt, rise around. The atmospherical agents work upon them with such effect, that probably two successive years do not pass without reforming or destroying these strange constructions. This clayey soil hardens easily in the sun, is of a grayish hue, or occasionally of a sparkling white; it is easily softened when mixed with water. The White Earth River is the great drain of the streams of this country, and corresponds admirably to the name bestowed upon it by the Indians.

“The industry of the settler will never succeed in cultivating and planting this fluctuating and sterile soil; no harvest ever crown his efforts. But though it offers no interest to the farmer, and little to the botanist, the geologist and naturalist may find abundant materials for study and illustration; for here are found curious remains of the mastodon (the largest of known quadrupeds) mingled with those of the mountain hare. I have seen well preserved skulls, horns, etc., so large that two men could hardly raise them. All of these bore the distinct impress of their primitive nature.”

In a letter written in 1841, Father DeSmet says:—

“As we proceeded toward the Black Hills, the flowers diminished in number, but now and then we found some

which had not been seen anywhere. I have taken notice of many of them, for the amusement of amateurs. Among such as are double the most common and those that are chiefly characterized by the soil on which they grow, are the rose-colored lupine, a medical plant bearing a yellow flower with five petals, called the prairie epinette; and still further on, where the soil is extremely barren, are seen three kinds of prickly pear; the flower of these are beautiful, and known among botanists as *Cactus Americana*. They have already been naturalized in the flower garden of Europe. The color of the handsomest roses are less pure and lively than the carnation of this beautiful flower. The exterior of the calice is adorned with all the shades of red and green. The petals are evasated like those of the lily. It is better adapted than the rose to serve as an emblem of the vain pleasures of this nether world, for the thorns that surround it are more numerous, and it almost touches the ground. Among the simples, the most elegant is the blue-bell of our gardens, which, however, far surpasses it by the beauty of its form and the nicety of its shades, varying from the white to the deepest azure. Adam's needle, found only on the most barren elevation, is the finest of all pyramidals. About the middle of its stem, which is generally three feet high, begins a pyramid of flowers, growing close to each other, highly shaded with red, and diminishing in size as they approach the summit, which terminates in a point. Its foot is protected by a number of hard, oblong, ribbed and sharp leaves, which have given it the name of Adam's needle. The root is commonly of the thickness of a man's arm, its color white, and its form resembling that of a carrot. The Indians eat it occasionally, and the Mexicans use it to manufacture soap.

“There are many other varieties of flowers, some of them very remarkable and rare even in America, which are still without a name even among the travelers. To one of the principal, distinguished by having its bronzed leaves disposed in such a manner as to imitate the chapter of a Corinthian column, we have given the name of Corinthian.

“Another, a kind of straw color, by the form of its stem, and its division into twelve branches, brought to our mind the famous dream of the Patriarch Joseph, and we have called it the Josephine. A third, the handsomest of all the daisies (Reines Marguerites) that I have ever seen, having a yellow disk, with black and red shades and seven or eight rays, any of which would form a nice flower, has been named by us the Dominical, not only because it appeared like the Lady and Mistress of all the flowers, around, but also because we discovered it on Sunday.”

CHAPTER III.

FOUR MONTHS IN THE BLACK HILLS.

During the year 1848, Father DeSmet spent four months in and around the Black Hills. Most probably the Indians never showed him any gold, for these two reasons: placer gold wherever it has been found on the different streams in the hills, was deep below the surface “down on bed-rock,” and the Indian had no tools to work with; and gold exposed in quartz-rock was tarnished by the effects of the atmosphere, so that it required an “expert” to determine the same. Undoubtedly Father DeSmet, as he was well versed in the science of geology, knew what these hills hid. But he kept this knowledge to himself until he thought silence on his part would no longer prevent white men from coming here. He wrote to his superiors about the country, but does not mention the presence of gold. The following letter dated:—

“ST. LOUIS, June 5, 1849.

“To the Directors of the Association of the Propagation of the Faith, Lyons, France.

“GENTLEMEN:

“It is time to pass to the Sioux, whose territory I

reached a few days after my visit to the Ponkaks. Mr. Campbell, one of the best interpreters in the country, generously offered to accompany me to the different tribes of this nation. His acquaintance with the country and the manners of the Indians, as well as the respect and friendship which the latter entertain for him, greatly facilitated my relations with them; I must also add, as a tribute of well-merited gratitude, that the officers of Fort Bonis and of Fort Pierre received me with the most delicate hospitality, and that the concurrence of their influence aided powerfully to render my intercourse with the savages easier and more profitable.

“ I have several times observed that the Indians inhabiting the valley of the Upper Missouri, are generally more cruel than those sojourning west of the Rocky Mountains. Probably this arises from their almost incessant wars, which inflame them with a love of plunder and a thirst for vengeance.

“ At the epoch of my visit to the Sioux, a troop of these barbarians were returning from a war against the Mahas, with thirty-two human scalps torn from defenseless old men, and from women and children whose husbands and fathers were off hunting. When they re-enter their villages, after the combat, it is their custom to attach these horrible trophies of their shameful victory to the points of their lances or to the bits of their horses. At the sight of these spoils the whole tribe shouts with joy, and every one considers it the highest gratification to assist at the scalp-dance and feast, which is celebrated amid the most discordant yells and fearful gestures.

“ They plant a post daubed with vermilion in the midst of the camp; the warriors surround it, flourishing in their hands the bloody scalps which they have brought back from the field of battle; each one howls his war-song to the lugubrious tone of a large drum; then giving in turn his stroke to the tomahawk on the post, he proclaims the victims that his hatchet has immolated, and exhibits ostentatiously the scars of the wounds which he has received.

“ Such is, even at the present day, the degraded condition of the unfortunate Indian. They never take the field without endeavoring to draw down the favor of the Great Spirit, either by diabolical rites or by rigorous fasts, macerations, and other corporal austerities. They even go so far as to cut off joints of their fingers and toes. Add to the thick shade of heathen darkness a shocking depravation of manners and you will have a faint idea of the lamentable position of these wretched tribes. Yet these same men welcomed me with open arms, as a messenger from the Great Spirit. A vivid emotion depicted on every countenance, accompanied their respectful attention to my discourse, while I instructed them in the great truths of religion.

“ An event which occurred two days after my arrival at Fort Pierre, contributed much to augment their confidence in me. I give it as it occurred. The tribe of the Ogallalas had entered in a hostile manner on the lands of their neighbors, the Absharokes (or Crows), and had attacked them. The latter defended themselves bravely, routed their aggressors and killed ten or twelve warriors. They had even employed a mode of repulsion which covered the tribe that experienced its effects with immortal disgrace; they pursued the Ogallalas with rods and clubs. This, according to their idea, signifies that their adversaries were worth neither the lead nor powder that would be expended in killing them. So shameful a defeat discourages the Indian, and he no longer dares appear before such an enemy.

“ In this affair, the chief of the vanquished nation, named the Red Fish, lost his daughter, who was carried off by the Crows into captivity. Melancholy and humbled, he deserted the wigwams of his tribe, which loss of honor and the death of so many of its warriors had overwhelmed with mourning and desolation. He presented himself at Fort Pierre on the morrow of my arrival. The object of his journey was to obtain the liberty of his daughter, through the mediation of the officers at

the fort; he offered eighty fine buffalo robes and his best horses for her ransom. In his visit to me, grasping my hand firmly in his, with tears coursing down his cheeks, and heart-broken with grief, he thus addressed me, while sobs often interrupted his utterance: ‘Blackgown, I am a most unhappy father, I have lost my beloved daughter. Pity me, for I have learned that the medicine of the blackgown (the prayer) is powerful before the Great Spirit. Speak to the Master of Life in my favor and I will still preserve hope of seeing my child.’

“At these few words, which the emotion of the aged man rendered singularly eloquent, I replied, that I sympathized with his sorrow, but that he must himself prepare the way for the blessing of heaven, and that by virtuous deeds he might obtain from the Great Spirit the accomplishment of his desire. I added that without doubt the Master of Life had been offended by his unjust attack upon the Crows, of which he himself had been the chief instigator, in his position as great chief, and that to himself solely he must attribute the misfortune of his child, and all the other miseries which had resulted from that expedition. I exhorted him to abandon in future all unprovoked attacks upon his neighbors, and to persuade his tribe to hearken to the orders of the Great Spirit which I had come to announce to them. I concluded by speaking to him of the mercy of God, who always heard the voice of the afflicted when they love and serve Him, I also promised him the assistance of my prayers, and he on his part agreed to follow my counsel.

“Red Fish returned soon after to his nation, and collected all the principal chiefs, in order to communicate to them what had taken place at the fort and in particular his conversation with me, the blackgown, concerning his daughter. At that very moment a cry of joy was heard in the extremity of the camp. They ran up from all sides to ask the cause; at length the good tidings are announced, that the captive daughter had escaped safe and sound from her enemies. The old chieftain scarcely dares to believe

what he hears. He rises and on leaving his cabin he has the unspeakable consolation of beholding once more his beloved child, whom Providence has restored. Imagine, if possible, his delight and astonishment, shared with him by the whole tribe. Every hand was lifted to thank the Great Spirit for the deliverance of the prisoner. The report flew quickly from village to village, and this coincidence, that Divine Providence permitted for the good of the Ogallalas, was to them a certain proof of the power of Christian prayer, and will, I hope, contribute to confirm these poor Indians in their good dispositions.

“The number of half-breeds and Indians baptized among the Sioux amounts to several hundred. I conferred the same sacrament upon six adults far advanced in years, two of whom were over ninety, and dwelt in a little hut of buffalo skins, in which a poor fire with difficulty imparted a little warmth to their members, chilled and stiffened with age. They received me with great joy. I spoke to them of the Great Spirit, of the necessity of baptism, of the future life, of the blessed or miserable eternity which must follow this state of being. They listened with avidity to these instructions, which I repeated during several days, and, in fine, received the sacrament of regeneration. They were never weary of telling me again and again that they had never ceased to love the Great Spirit, and that, being ignorant of more suitable prayers, they had daily offered him the first fruits of the calumet.

“This recalls to my mind a fact, insignificant in itself, which nevertheless proved a source of genuine consolation to me. On my arrival in the nation of the Brules, I was singularly surprised to find myself followed by a youth of about fifteen years of age, whom my presence seemed to afford a degree of pleasure which it would be difficult for me to describe. The little kind encouragement by which I corresponded to his manifestation of contentment, so effectually conciliated his affection for me, that the efforts and threats even of the savages who surrounded me, could not remove him any length of time from my person. Scarcely

had they taken him from my side by violence, than another path brought him back; he even penetrated in the grand council of the chiefs, in which the expeditious diplomacy of the Brules agitated the question of which my arrival among them required a solution. Night came on and, terminating the deliberations of the assembly, obliged me to withdraw from my new friend. His narrow and flattened brow, his silly stare and extraordinary gesture, gave me to understand that he was of the number of those beings whose want of reason is safeguard against the loss of innocence, and I resolved to regenerate him on the morrow, in the waters of baptism. I therefore caused the whole tribe to be collected, and, after giving them a clear explanation of the blessings of the sacrament that I was going to confer, I caused them to understand what the happiness was which was in reserve for eternity to a being apparently so vile, and who had hitherto been only an object of contempt, or at least of their compassion.

“These few words produced a profound impression upon my new auditory, and were followed by numerous petitions for the grace belonging to the Great Spirit, like my poor friend, Paschal (this was the name of the little idiot), who is now treated with respect almost amounting to veneration throughout his whole tribe. But not being able to remain with them longer than a few days, I contented myself with baptizing a great number of their children; and giving the others a hope, that later we would return and visit them, and that we could then instruct them, and grant in a more useful manner, the favor which they solicited.

“There is a custom among the Indians which is excessively fatiguing to the stranger or to the missionary who visits one of their villages. As soon as he arrives a succession of grand banquets is given in his honor, and Indian politeness exacts that he accepts all these invitations, and the savage prepares without delay the best and the most delicate that he has. The fat dog, which with them replaces the fatted calf, is the most acceptable dish and is reserved for great occasions. After this succeed buffalo

tongues, ribs, etc., and a great variety of fruits, grain and roots.

“ In every camp I visited I was conducted ceremoniously from banquet to banquet, by the leading chiefs. Everywhere I was presented with a dish so filled with their delicacies that each portion would have sufficed me for several days. All must be consumed. This would be impossible were it not for the allowance of the blessed privilege of conducting one or two eaters with us. In some Sioux camps, the guests are permitted just to touch the dish, and then take it home to their cabins.

“ In the various camps I visited I presented each one of the great chiefs with a medal of our Holy Father, Pope Pius IX. On this occasion I explained to them the high position of the Great Chief of the Blackgowns—the respect, the veneration and the love that all the nations faithful to the Great Spirit testify to His vicar on earth, etc. They immediately brought the calumet, and after having offered it first to the Master of Life, imploring his blessing, the savages, in their engaging simplicity, presented it to his visible representative, entreating me to make known to him the esteem and love which they bear him, and the ardent desire to listen to the blackgowns sent in his name.

“ When distributing medals to the Indians these explanations become necessary; for being naturally inclined to superstition, they often treat those objects with more than respect. A Sioux chief gave me a singular proof of this. While I was suspending the medal of Pius IX to his neck, he testified an extraordinary joy and gratitude. ‘ I will place it,’ said he, ‘ with my War-Manitou; it will render me as prudent in councils during peace, as the other has rendered me strong in battle.’ I asked an explanation of these words. He at once opened a little box and drew forth from it a package carefully wrapped up in buckskin. He unrolled it, and, to my great surprise, I saw a colored picture of General Diebitsch, in full uniform, and mounted on a beautiful war-horse.

“For years the Russian had been the Manitou of war to the Sioux chief; he invoked him and offered him his calumet, before all his enterprises against his enemies, and attributed to him the success of the many victories which he had gained. I endeavored to disabuse the poor Indian of his strange devotion, and have reason to hope my efforts were not useless.

“As stated already, I was sent to the Sioux tribes to sound their dispositions in a moral and religious point of view. The little account that I have the honor of presenting you discloses the result of my visit. What I have narrated touching these inhabitants of the desert, offers little encouragement to the missionary. There is an immense difference between them and the Flatheads, and the numerous other nations that occupy the regions west of the Rocky Mountains. These first children of my apostolate have given me great consolations that I should vainly seek among the Sioux. Would then a mission with the latter prove destitute of success? The little experience that I have been able to acquire, and my residence among them, inspire me to trust more confidently in Him who holds in His hands the most obdurate hearts and the most refractory wills. I hope that in the course of this year something may be done in favor of these degraded Indians, so long left without the aid of religion. The same happiness will be granted to the Blackfeet, who already count eleven hundred neophytes. The pious association of the Propagation of the Faith may contribute greatly to the accomplishment of this work, by their fervent prayers.

“I quitted the uplands of the Niobrara and the Maukizita toward the end of October, 1848, before the season of rain and snow. These places are the temporary abodes to which the different tribes of the Sioux repair in autumn, for the purpose of hunting the wild animals, which abound at that time, and thus provide themselves with hides and meat for the approaching winter. The consumption of skins among the Indians must be immense, for all Indians use them for constructing their tepees, as

well as for the harness of their horses and their own clothing. Last year 110,000 buffalo robes, with skins of elk, gazelle, deer, big horn, otter, beaver, etc., and 25,000 salted tongues were received in the warehouses in St. Louis. This may give you an idea of the extraordinary number of buffalo killed, and of the extent of the vast wilderness which furnishes pasturage to these animals.

“We set off from Fort Bonis, which is near the mouth of the Little Medicine River. Our trip was delightful. The weather proved magnificent and the two shores of the Missouri, teeming at this season with an extraordinary quantity of every species of game, offered the most graceful and varied spectacle, while it opened a vast field to the greediness and skill of our hunters.

“At Council Bluffs the sky, which had been hitherto clear and serene, suddenly changed to give place to wind and tempest, and thick clouds of snow, which accompanied us during two days. We took refuge in a dense forest, in order to defend ourselves from the inclemency of the storm. The wild honey which we found there was our principal resource, one poplar alone, which we felled, furnishing us with more than we needed.

“We made but little progress during ten days, on account of headwinds, rain and snow. Before arriving at the mouth of the Grand Tarkio, the Missouri was so covered with floating ice that we, in our frail bark, were exposed to the greatest danger, especially from the many sawyers with which the bed of the river is thickly set, and which discover or conceal their menacing heads on every side. These are trees, or trunks of trees, which the river uproots and washes from its banks, and whose roots get firmly fastened in the muddy bed of the river. As there are no dikes or embankments which can hinder the river from overflowing, it often happens that whole forests are uprooted and swallowed in the waves. These create great embarrassment and obstacles to navigation.

“Prudence forced us to abandon our boat; I therefore hired a farmer’s wagon, which brought us safe and sound

to St. Joseph after a drive of two days through a great forest which skirts the Missouri. The steamer which I hoped to meet there had departed on the eve of my arrival and thus the opportunity of a prompt return to St. Louis appeared lost to me. I resolved, however, to exert myself to the utmost to overtake the boat; this to many would appear folly; the idea of running after a high pressure steamboat certainly does appear quite ridiculous. But I relied on the numerous delays of the boat on the different sand-banks, which were more likely to take place, also, as the season was advancing. I calculated well; in twenty-four hours I was on board.

“For four months I had been night and day exposed to the open air, and, as in all my other excursions, with no bed but a buffalo robe. Yet my health had been uninterruptedly good, not even suffering from the slightest attack of cold; but scarcely was I subjected during one day, to the heat of the stove in the cabin of the steamboat, than I was seized with a violent sore throat — it being my first indisposition through the whole of my long journey. At length after four months’ absence, I arrived without other accident at the University of St. Louis, where, enjoying with my brethren the charms of community life, I soon forgot the little fatigues of my expedition.

“I am, with the most profound respect, and esteem the most sincere, gentlemen,

“Your most humble and most obedient servant,

“P. J. DeSmet, S. J.”

CHAPTER IV.

THE FATHER DE SMET MINE.

Father DeSmet visited the Indians around the Black Hills again in 1851 and 1864, and made his last missionary trip to Dakota in 1870 with Father Panken. This gentle-

man wrote to the author the following letter, which explains itself:—

“ ST. LOUIS, Mo., October 12, 1887.

“ REVEREND AND DEAR FATHER ROSEN :

“ In compliance with your request I send you some items about the missionary excursion of Father DeSmet and myself to the Sioux Indians of Dakoka during the months of June and July, 1870. Father P. J. DeSmet and myself left Sioux City, Iowa, in June, 1870, on the steamer *Far West* for the Grand Sioux Agency, then the principal agency in Dakota. Our work commenced on the boat with giving instructions to the mates, hands and travelers. Then at every landing place the boat stopped either to wood or to deliver freight, when we spoke to the Indians, settlers and workingmen.

“ At one landing place, while the boat was wooding, an interpreter took me to a small camp of Indians who wished to see a blackrobe. When I got there about a dozen small children were brought to me to be baptized. As soon as I was through an elderly Indian, holding a baby in his hands, stood up and with tears in his eyes, said: ‘ Black-gown, I wish to speak to you.’ I answered, ‘ Speak, the blackgown listens.’ ‘ Blackgown,’ he resumed, ‘ we heard about your coming two moons ago. My wife was then very sick, almost at the point of death. She was anxious to see you and be blessed with water. You did not come. She told me to have this child blessed as soon as you should come. I therefore brought this child to you and had it blessed.’ I answered, ‘ I hope and trust that the Great Spirit will have rewarded her for her good desire, and that He will reward you also for complying with her request.’

“ We stopped on going up the river at the Cheyenne Agency, five miles above Fort Sully. The Indians came immediately and surrounded us. Father DeSmet made them a short speech and presented them with a box of tobacco, saying that he was sorry he could not give them any more. The ‘ Great Mandan,’ a powerful chief, replied:

‘Blackgown, we thank you; your box is small but your heart is big.’

“On our arrival at the Grand River Agency Indian chiefs greeted us, we smoked the calumet, though it was 4 o’clock a. m. We stayed there over three weeks and baptized over two hundred children and four adults, and we held several councils with Indians. I went to the camp of the Piegi Indians, or Sioux-Blackfeet, to attend a dying girl who was about 19 years old. She seemed to be a good, modest child. I baptized her after some preliminary instructions. When I was about to leave, the mother of the girl lifted up her hands and wished me the favors and blessing of the Great Spirit, and hoped that her daughter would meet me in the same happy land. The girl died the next day.

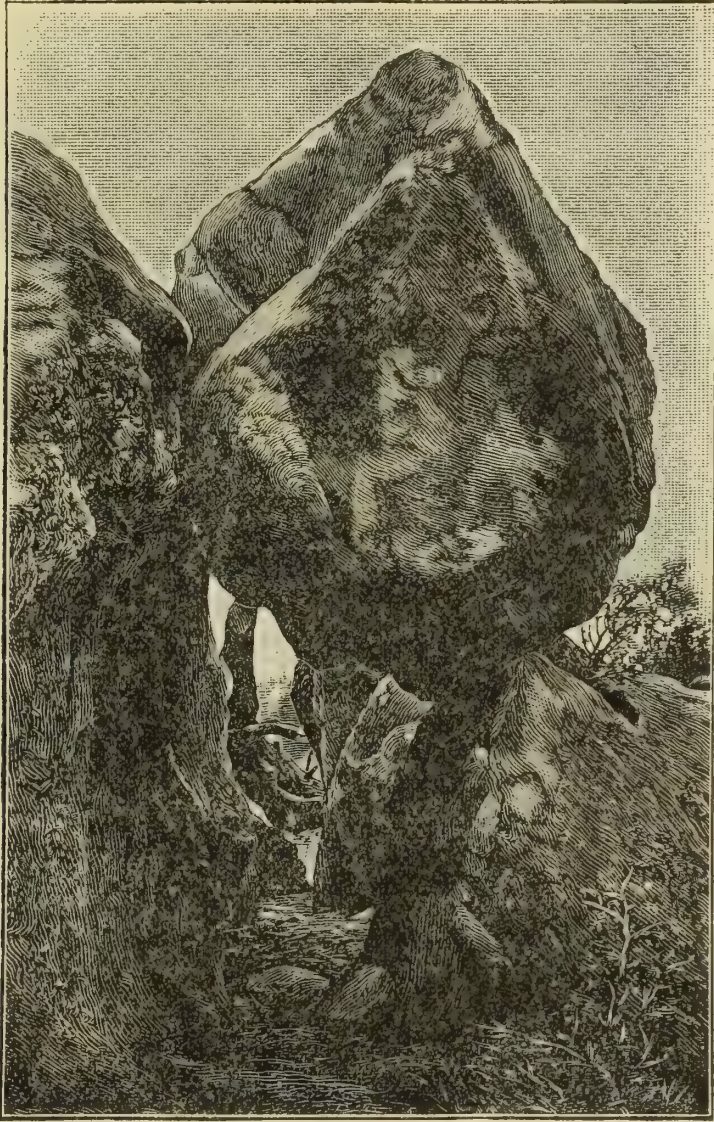
“On Sundays we held service, Mass and sermon for the Indians and the whites. It was always well attended by both Indians and whites. From Grand River Agency we went on the steamer Peninah down to Fort Sully. We had to land about three miles below the fort. The ambulance came to get us and our baggage.

“During our stay at the fort we visited the Indians at the Peoria bottom, baptized some of them and rectified some marriages. Mass was said daily, confessions heard, and the sacraments administered to the whites.

“We traveled by wagon from Fort Sully to the Crow Creek Agency. At night we slept on the ground. At this agency we did much good among the soldiers. Of one company 35 men went to confession, and they came in a body the next morning to receive Holy Communion. Some Indians asked us to baptize their children; we did as asked, but one of the children dying soon after, the medicine-men profited by the occasion and deterred others from having their children baptized. In this they were but partially successful.

“Whilst there we were the guests of Col. Ilges and Capt. Hamilton. In the meantime there arrived at the camp Gen. J. Hardie, U. S. A., Inspector-General of the

Department of the Missouri. He had the kindness to take us along to the Lower Brule Agency, where we found several troops and Indian camps in the neighborhood. The Indians were several times visited and instructed. Father DeSmet married the interpreter to an Indian woman whom



ROCK OF AGES.

he had baptized. This good man was a great help to us. Father DeSmet knew him well, having made his acquaintance years before.

“A boat from the upper river arrived and we all went down the river. Father DeSmet had become quite ill and determined to go to Sioux City. General Hardie and

myself stopped at the Whetstone Agency, some miles above Fort Randall. I said Mass, was invited to the Indian camp, baptized several children, also an Indian woman, the daughter of a hostile chief, and married her to an Irish settler. They expected me to stay longer, but I could not. Then the representatives of eighty families of Indians and half-breeds came to ask me to stay with them; I told them I could not. I was then urged to tell Father DeSmet to send them a blackgown. I ascertained later that some of these Indians are good Catholics.

“Saturday evening I went to Fort Randall. The next day I said Mass late and preached. Many officers and soldiers attended. On Monday morning at 3:30 we crossed the Missouri in a skiff. A Dakota storm overtook us whilst yet on the river. Arriving at the Yankton agency I could but speak a few words to the Indians. At Yankton we stopped for a few hours of sleep. I found neither church nor priest there. At Vermillion we met some pioneers ready to go over to the Black Hills country in search of gold. At a settlement some twelve miles from the Big Sioux river I found a church but no priest, so I continued my journey till I reached Sioux City; here I found Father DeSmet, who was much improved and ready to go to St. Louis. It was understood that I should return with some missionaries to Dakota next spring, and I was told by my superior to stay at Leavenworth and hold myself in readiness. But when the time came for opening the mission, Father P. J. Meester, S. J., and F. X. Kuppens were sent to Dakota. They remained but a few months, being recalled before winter set in. J. PLANKEN, S. J.”

In 1871, Father DeSmet sailed for Europe. While on the voyage, he met with an unhappy accident, that was serious in its consequences. On one occasion, a few days before reaching the shores of the Old World, as he was descending the stairway to the cabin, a huge wave struck the vessel, and the shock was such that the hardy and venerable missionary was thrown to the deck below, thus

breaking one of his ribs. Shortly after arriving in his native Belgium he recovered; whilst there he was made a Knight of the Order of Leopold, an honor which few attain, and which he held in common with Marshall McMahon, afterward President of France.

He returned to the United States, reaching St. Louis on April 25th, 1872, but years of exposure, together with his recent injury, had shattered his iron constitution, and he never regained his health.

After much suffering, in his seventy-second year, on May the 23d, at half-past two o'clock a. m., he calmly breathed his soul to God, surrounded by his brother Jesuits. He died in his own room at the St. Louis University, where he had often been visited in his last illness by his countless friends of all religious creeds and ranks of society. His honored remains were borne to Florissant, in Missouri, and there, where he first began his labors, rests all that is earthly of the saintly and heroic Father Peter John DeSmet.

On his tombstone, a wooden board, in nothing different from that of his brethren, I found the following inscription:—

+
I. H. S.
P. J. DeSmet,
Natus Jan. 31, 1801.
Obiit
Mai 23, 1873.

His obituary notice says:—

“ Perhaps no Jesuit, since the restoration of the order in 1814, has gained so widespread a celebrity as Father De Smet. As long ago as 1843, a volume of his letters in which, with his own peculiar power of narrating and describing events and scenes witnessed by him, he gave an account of his first journey to the Rocky Mountains, was read extensively and with avidity in the United States and throughout Europe.

“ On the various trips undertaken, in order to advance the

welfare of the Indians missions, he traveled nearly three hundred thousand miles. He collected, principally in Belgium and Holland, over one million of francs (\$200.000,) besides a large number of objects for the altar, which were used in the various missions in Kansas and the Rocky Mountains.

“During a period of forty years he induced more than one hundred young men to devote themselves to the service of the altar in the province of Missouri; and, finally, not to estimate the amount of good done for the Indian race through these different means, he baptized many thousands of the aborigines with his own hands.

“His name is still in benediction, and his love for the red men is still gratefully remembered among the Indians of the Northwest, with whom his influence was so great that the United States Government more than once used his moral power over those savages to pacify them, when irritated into violence by the cupidity and injustice of dishonest agents, or by sharp traders that had swindled or robbed them.

“Father DeSmet received from the Government at Washington the exclusive right of nominating all Indian agents for Catholic tribes, or Catholic sections of tribes; he exercised his office till a few months before his death, when he was compelled by ill health, to resign the trust.”

Various have been the stories told about Father DeSmet and his finding gold in the Black Hills of Dakota. It must not be forgotten that the name Dakota applied for many years not only to all the territory covered by the two Dakotas of to-day, but by Montana and parts of Idaho and Wyoming; and that the Wind River Mountains of Wyoming were, and by many are still called, the Black Hills; or the Black Hills in Dakota were called the “Little Black Hills” and those in Wyoming the “Great Black Hills.”

Many of the stories come as near the truth as the caricature of the missionary's photo, as seen in the following illustration.

But enough is known that proves that Father DeSmet was at various times in these Black Hills, and that he was well acquainted with the geology of the country. Had he lived till 1877, when the Hills were ceded by the Indians to the United States, he no doubt would cheerfully have given his information.



FATHER DE SMET AND THE ABORIGINAL MINER.

The following story, copied from the St. Louis *Globe-Democrat*, go to show how advantage was taken of the authority of Father DeSmet: "Early in the '60's, at a dinner given Father DeSmet, the celebrated Indian missionary, at the St. Louis University, Barney Caulfield, late member of Congress from Chicago, happened to be one of

the guests entertained at the dinner. This was long before the Black Hill gold fever broke out, but the conversation turning upon the rich mineral deposits of the country, Father DeSmet, who had been in the wildest portion of the West during his missionary work, related how he had discovered most extraordinary gold deposits in the Black Hill country while digging into a mountain, and said that after finding the precious ore he had again carefully covered it up. Those present at the table used every effort to induce him to locate his wonderful find, but he firmly declined to do so, giving as his reason that he did not wish his children (the Indians) to be disturbed. Although repeatedly urged to do so, Father DeSmet never divulged the secret.

“When the Black Hill fever took so many miners to Deadwood, immense deposits of gold ore were discovered around Deadwood and Central, one of the prospectors found what he believed the identical mine of which Father DeSmet had spoken. The news went back to St. Louis, and the capitalists were excited. Hon. B. Caulfield proceeded to Deadwood, secured an option on the mine at low and favorable figures, and brought the same to St. Louis. This option he shared with Judge J. C. Normile, who in turn took into the syndicate Erastus Wells, Edwin Harrison, the Locker Brothers, then in the banking business, L. M. Rumsey, H. L. Dousman and S. C. Gaty. The money was all raised and deposited in the bank, save the subscription of Mr. Gaty. This gentleman very mysteriously withheld his share of the fund, promising to pay from day to day, all the time urgently requesting that he be permitted to continue in the syndicate. There was another gentleman ready and eager to take his place, but at his own solicitation Mr. Gaty was kept in.

“Time swept by, and it was getting uncomfortably close to the date when the money must be in Deadwood to reap the benefit of the option of the mine, and still Mr. Gaty's subscription was not forthcoming. At last Judge Normile, seeing the danger of losing the prize, had Mr. Gaty's name struck off, and permitted H. L. Dousman to double his



357. "We have it rich." Washing and
baiting gold, Rockerville, Dak.
Old timers, Spriggs, Lamb and Dillon at work.
Photo and copyright by Grubb, 1889.

"WE HAVE IT RICH." WASHING AND PANNING GOLD.

subscription, and Mr. Wm. Locker then started for Deadwood to close the deal. Under ordinary circumstances he could have made the journey in ample time, with forty-eight hours to spare. It was early in November when he started, and as ill-luck would have it, a severe snowstorm set in, unusually early for that region, and Mr. Locker was detained between Cheyenne and Deadwood until thirty hours after the option had expired. The value of the property had been raised abroad and a syndicate of wealthy Californians had sent representatives to Deadwood to secure the prize if possible. They made an offer largely in advance of the price which the St. Louis party had the option to purchase and the Californians anxiously awaited the action of the St. Louis syndicate.

“All of the last day that the option held good representatives of the California party were at the Deadwood bank and others at the stage office scanning the horizon and hoping that the St. Louisans would not put in an appearance, yet fearing that they might. It was a day of intense excitement to them, as they afterwards acknowledged, and when the sun sank below the western horizon and the St. Louisans came not the hearts of the Californians were gladdened. They immediately closed the contract at double the figure at which the mine could have been secured by the St. Louis syndicate, paid the cash, and the prize was theirs.

“By this unfortunate delay the St. Louis party lost perhaps the richest mine in America! When the Californians secured it they immediately stocked it for ten millions of dollars.”

So far the story. The price paid was \$400,000 and to-day the mill which was to reduce the inexhaustible body of ore, is running continuously upon ore taken from the Deadwood-Terry mines owned by the Homestake Company.

BOOK IV.

CHAPTER I.

LEWIS AND CLARK'S EXPEDITION, ETC.

Mr. Jefferson, while at Paris as American minister in 1787, met John Ledyard, who came to France to attempt a business arrangement in the fur trade of the northwest coast of America. Failing in this, Mr. Jefferson proposed to him a land expedition through Northern Europe to Kamtschatka and to the Pacific. Russia gave consent, and Ledyard at once set out and went into winter quarters 200 miles from Kamtschatka. Here he was stopped by the Russians and compelled, under arrest, to return.

In 1792, Mr. Jefferson proposed a subscription by the American Philosophical Society to engage a person to go to the northwest coast by land. Captain Meriwether Lewis, then stationed at Charlottesville, Va., was engaged for this purpose. Mr. Micheaux, a French botanist, was to be his fellow explorer. They proceeded as far as Kentucky, when a message from the French minister at Washington recalled Mr. Micheaux, and the journey here terminated.

On the 18th of January, prior to the Louisiana purchase, President Jefferson, in a confidential message to Congress (the act for establishing trading houses among the Indians being about to expire by limitation), recommended that the act be continued and extended to posts among the Indians on the Mississippi river, and that a party of explorers be sent up the Missouri river to its source, then to cross the Rocky Mountains to the Pacific Ocean. This was approved, an appropriation made, and Captain Lewis at his own

request, was detailed to command the expedition. First Lieut. William Clark, brother of General George Rogers Clark, was afterwards detailed with him. It was an expedition of discovery and inquiry. Its instructions were to notice and detail the geography and character of the country, to enter into negotiations with the Indians for commerce, and to describe their habits, characteristics and history.

The party consisted of Meriwether Lewis, captain U. S. A., First Regiment Infantry (formerly Mr. Jefferson's secretary); William Clark, first-lieutenant U. S. A.; John Ordway, Nathaniel Prior and Patrick Gass, sergeants U. S. A.; Charles Floyd, William Bratton, John Colter, John Collins, Pierre Cruzarte, Robert Frazier, Joseph Fields, George Gibson, Silas Goodrich, Hugh Hall, Richard Worthington, Thomas P. Howard, Peter Wiser, John Baptiste Le Page, Francis Labuiche, Hugh McNeal, John Potts, John Shields, George Shanon, John B. Thompson, William Werner, Alexander Willard, Richard Witcher, Joseph Whitehouse, John Newman, George Drulyard, and Tousaint Chabono (the last two interpreters), the wife of the interpreter Chabono, a Snake squaw and her child, and "York," a colored servant to Captain Clark.

President Jefferson himself prepared the written instruction for Captain Lewis. The party in boats entered the Missouri river, May 4th, 1804. They were the first party of American explorers to ascend the Missouri river into the land of the Dakotas; their printed journal affording to the world the earliest written description of the Northwest of the United States. During their westward journey, on the morning of the 27th of August, 1804, the expedition passed the mouth of the James river, when an Indian swam to their boats and informed them that a large body of Sioux were encamped in their immediate vicinity. Three men with an interpreter, were dispatched to the Sioux camp, while the boats proceeded on about eleven miles, where, on a beautiful plain, near Calumet Bluff, above where Yankton now stands, the party encamped and waited for the arrival

of the Sioux. A speech and appropriate presents were prepared, and here at noon the chiefs and warriors of the Yanktons arrived, and were received in council under a large oak tree, near which the American flag was flying.

Among the Indian nations or tribes enumerated by Mr. Gass, the journalist of the expedition, as then inhabiting Dakota, wholly or in part, were the Great and Little Osages, Canips, Otoes, Pawnees, Loups, Mahas, Poncas, Ricarees, Mandans and Sioux. He says: "The latter nation is not fixed on the banks of the Missouri river, but habitually goes there to hunt."

Speaking of the Black Hills the Indians said: "The Evil Spirit was mad at the red people and caused the mountains to vomit fire, sand, gravel and large stones, to terrify and destroy them, but the Good Spirit had compassion and put out the fire, chased the Evil Spirit out of the mountains and left them unhurt, but when they returned to their wickedness the Great Spirit permitted the Evil Spirit to return to the mountains again and vomit forth fire; but on their becoming good and making sacrifices the Great Spirit chased away the Evil Spirit from disturbing them, and for forty snows he has not permitted him to return."

On the 24th of September they reached the mouth of Teton, now Bad River. Here they remained over one day for the purpose of holding a council with the Indians, who visited them to the number of fifty, and were very insolent and hostile, refusing to let the party depart; but they finally let them go when the officers told them they had small-pox enough on board to kill twenty such nations in a single day. Of all things the savages feared this deadly disease. They were so mischievous and hostile that the party did not venture on shore but anchored in the stream. This may have been the reason why the Indians called the river "Bad River."

On the 1st of October they passed a river corruptly called Dog River, as if from the French "chien;" its true appellation is Chayenne, from the Indians of that name.

This river rises in the Black Mountains ; and Mr. Valle, one of three French traders whom they found here waiting for the Sioux coming down from the Ricaras, informed them that he had passed the last winter in those mountains. They were very high, he said, covered with a great quantity of pine and an abundance of game was found there.

Soon after the Lewis and Clark expedition, American traders and adventurers began to push their way into the hitherto unknown Northwest, establishing posts for the trade in furs with the natives. The goods for the trade with the Dakotas were brought up the river in open boats propelled by oars and wind, and "cordalled" over the bars with long tow ropes fastened to the boats and drawn by men walking along the shores. The furs and peltries were taken to the distant St. Louis market in the spring, the journeys down the upper tributaries being often made in circular boats of skins, with which the channel could be followed, regardless of the sand-bars, snags and darkness.

The Missouri Fur Company was established in 1808 ; the American Fur Company by John Jacob Astor, of New York, in 1809, and about this time the first trading posts were established in the country drained by the Missouri river, one of these posts being at the junction of the north and south fork of the Cheyenne river, close to where the Smithville post-office now is. Astor fitted out the first overland fur party in 1811, who voyaged in oar boats up the Missouri river to the Arikaree Indian villages, and from thence Messrs. Hunt and Crook went overland across the country north of the Black Hills, through the Wind river and Rocky Mountains to Astoria, on the Pacific coast.

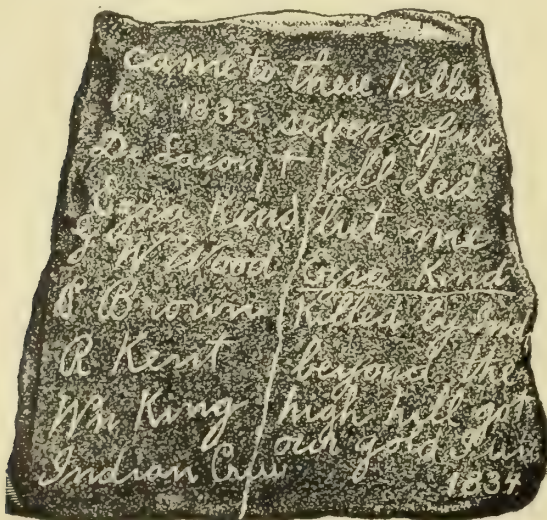
The Rocky Mountain Fur Company commenced to make annual expeditions to the head-waters of the Missouri in 1826. The American Fur Company, stimulated by this competition, extended their operations, until, in 1832, it had become the controlling corporation in the whole Northwest.

It is claimed that Pierre Chouteau, of this company, was the first man to run a steamboat up the Missouri river into Dakota, and under his pilotship the steamer Antelope and

Yellowstone, in 1832 and 1833, were the first to plow Dakota's waters.

In 1833 Prince Maximilian of Neunvied, Germany, was on the steamer Yellowstone, and from the 15th to 19th of June stopped at the mouth of Bad river. He says: "Upon the Cheyenne river towards the Black Hills are found the Cheyenne Indians, and Dr. Morse says they number about 3,250 souls."

From the year 1837, when the scheme for a Northern Pacific Railroad was first projected, up to the 2d of July, 1864, when President Lincoln signed the charter for the proposed Northern Pacific Railroad, the newspapers gave glowing accounts of the rich land west of the Missouri, to be opened up by the enterprise to the agriculturist, and of the beds of coal and mines of gold and silver, and the richness of the country which the Sioux occupied. These matters were discussed in meetings held in Eastern cities and in newspapers, without the slightest reference to the rights and possession of the Indians, guaranteed by solemn treaty. The speakers at those meetings often drew on their imagination for facts, exaggerating in proportion to their ignorance of the resources of the country. They pictured a new El Dorado in the Big Horn Mountains and in the Black Hills, and called upon the adventurers to join expeditions which were to start from the neighboring cities and fight their way through to their destination in spite of hostile Indians.



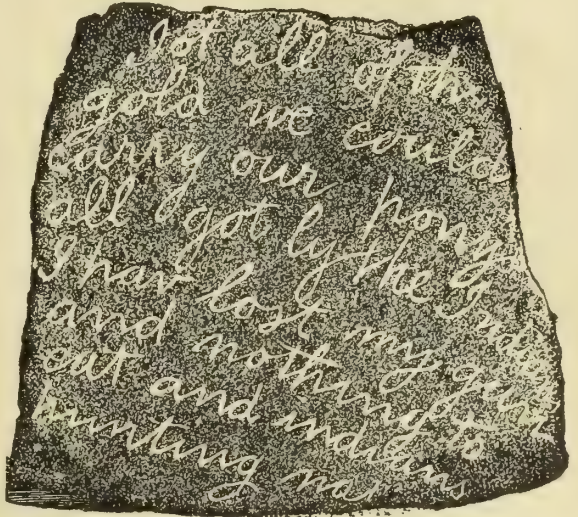
It is claimed that a Mr. Lewis Thoen found a few years ago, on the top of Mount Lookout, near Spearfish, a stone slab upon which in irregular characters had been cut, evidently with a knife, this inscription:

"Came to the Hills in 1833, seven of us, Doctor Lacon, Ezra Kind, G. W.

Wood, F. Brown, R. Kent, William King, Indian Crow, all dead but me Ezra Kind. Killed by Indians beyond the High Hill. They got all of our gold, June, 1834."

On the opposite side is cut in similar characters:

"Got all the gold we could carry; our ponies were got by the Indians. I have lost my gun and have nothing to eat. Indians are hunting me."



In the summer of 1852, a party of three hundred left Council Bluffs to cross the plains and mountains in search of wealth said to lie in the streams of California. They were led by Captain Douglas of St. Joseph Valley, Michigan. After a long and weary march, they reached Fort Laramie, where they rested several days. While there a French trapper came to the camp and learning that they were in search of gold told them that if such was the case there was no necessity for them to go as far as California since he could bring them to a place not more than a few days' journey, in the Black Hills, where they could find all the gold they wanted. A party of thirty men accompanied the trapper to prospect the country. It was agreed that if they discovered gold they would overtake the main party on the Humboldt river and report. Eight of them did overtake the main party as agreed and reported that they found gold upon two streams but that owing to the amount of water and depth of the earth they were unable to reach bed rock; that from those creeks they went in a northerly direction and found gold in paying quantities, and that the main body of the party had sent them to make the report as agreed upon and induce them to return.

As it was late in November when the delegation reached the Humboldt and the Indians being troublesome at the

time, it was deemed unsafe to return, and all went on to California. Those in the hills were never after heard from.

Many are the traces left by early prospectors. In 1876, some miners prospecting on Battle Creek discovered an old shaft about ten feet deep, and thinking it might be an easy place to reach bed rock, they sank it about ten feet deeper, where at a depth of twenty feet from the surface they found an old shovel and a pick. The wooden handles were decayed and the iron badly rusted. On the same creek some parties unearthed a skull at a depth of three feet, and near by found a pair of silver bowed spectacles, which looked as if they had lain there a long time. Near by are a number of prospectors' holes, in some of which are trees growing, the largest about eight inches in diameter. An old oak tree over two feet in diameter having been cut down near by the prospectors' holes, is almost decayed.

Between Rapid and Galens there is an old trail along which there are stumps, which even in 1877 were so badly decayed that the slightest blow upturned them, showing the ax mark where they were chopped; the bodies of the trees were decayed. Below Deadwood an old hatchet was found which showed evidence that it had been buried for many years.

CHAPTER II.

WARREN'S EXPEDITION.

This expedition was made under the direction of Capt. A. A. Humphreys, in charge of Office of Exploration and Survey, and for which the sum of \$25,000 was set apart. It organized at Omaha, and left there June 27, 1856. The objects sought were to gain knowledge of the territories of Nebraska and Dakota generally in both practical and scientific matters, and among the former was specially

desired the nature of the routes pursued, as to their being favorable or otherwise to the construction of common roads or railways.

The expedition divided at once into two parts, one going direct to the Loup Fork of the Platte, the other up the east bank of the Missouri to Sioux City, where an escort was obtained, and thence as directly as possible to the rendezvous at the Loup Fork. Thence the whole expedition proceeded up the main Loup Fork to its source, in longitude 104 degr., 35 min., in the Great Sand Hills, making occasional side examinations some ten miles on each side of the river. Thence the expedition tried to proceed directly north to the Niobrara river, but the sand ridges compelled it to take a westerly course through a country with occasional alkaline and fresh water lakes, but scantily watered, till it struck the Indian trail between the Platte and Niobrara, in longitude 102 degr., 30 min. Thence it easily reached the Niobrara river, which it followed to where the trail turns off to Fort Laramie, and thence to that point, the longitude of which was determined to be 104 degr., 30 min.

In two parts the expedition left Fort Laramie, September 4, 1856, one portion proceeding down the Niobrara to about longitude 101 degr., 30 min. and awaiting the other, which proceeded nearly due north to the neighborhood of Rawhide Butte, which was examined, thence to the Indian agency of the Dakotas, on the Niobrara and from there by a well marked trail to the Old Woman's Fork; down to the Cheyenne, along this some distance, thence to Beaver creek, and along the east branch of that into the Black Hills; entering these from the west Inyan Kaya creek was reached; thence southeast by a peak named in honor of General Harney; thence to Bear Butte and the north fork of the Cheyenne (Belle Fourche); thence southeast to the south fork of the Cheyenne, where connection was made with the route of 1855; thence up this fork for two days, then through a portion of the "Bad Lands" to the White river; thence southerly to the Niobrara river, and thence

to the rendezvous with the other party at the mouth of Reunion creek.

The whole expedition then proceeded down the Niobrara river to the junction of Turtle creek, when the main party proceeded directly to Fort Randall, while a special party continued the reconnoissance of the river to the Missouri. At Fort Randall a longitude was determined, and thence the expedition went to Sioux City, where it closed. Lieut. G. K. Warren, T. E., commanded the expedition, escorted by thirty enlisted men of the Second Infantry under Lieut. James McMillan. The civil assistants were J. H. Snowden and P. M. Engel, topographers; Dr. F. V. Hayden, geologist; W. P. C. Carrington, meteorologist; and Dr. J. Moffatt, surgeon.

This was the first regularly organized military and scientific expedition which visited the Hills. In his report to the government Lt. Warren says: "Setting out from Fort Laramie on the 4th of September (1856), we proceeded direct for the Black Hills via Raw Hide Butte, Old Woman's creek, the south fork of the Cheyenne, and Beaver creek; up a branch of this last we entered the Hills. We continued north to the vicinity of the Inyan Kara (or the peak which makes the mountain) a remarkable high basaltic peak, one of the highest of these mountains, and so far to the north that we had a full view of the prairie beyond. Here we were met by a very large force of the Dakotas, who made such earnest remonstrance and threats against our proceeding into their country that I did not think it prudent for us, as a scientific expedition, to venture further in this direction. Some of them were for attacking us immediately, as their number would have insured success; but the lesson taught them by General Harney, in 1855, made them fear they would meet with retribution, and this I endeavored to impress upon them. We were at the time almost in sight of the place where these Indians had plundered Sir George Gore in 1856, for endeavoring to proceed through their country, and one of them was actually mounted on one of his best horses,



THE CHINESE HOSE TEAM
The Champion Chinese Hose Team of
America, who won the great Hook-and-Ladder
race at Peaswood Park, July 4th, 1898.
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taken at the time. Sir George Gore's party was only about half as numerous as mine; but there were a number of my party which I had picked up at Fort Laramie on whom was placed very little reliance.

“The ground of their objections to our traversing this region were very sensible and of sufficient weight, I think, to have justified them in their own minds in resisting; and as these are still in force for the prevention of the passage of any other party of whites, not large enough to resist successfully, they are of sufficient importance to be repeated here. In the first place they were encamped near large herds of buffalo, whose hair not being sufficiently grown to make robes, the Indians were, it may be said, actually herding the animals. No one was permitted to kill any in the large bands for fear of stampeding the others, and only such were killed as straggled away from the main herds. Thus the whole range of the buffalo was stopped so that they could not proceed south, which was the point to which they were traveling.

“The intention of the Indians was to retain the buffalo in their neighborhood till their skins would answer for robes, then to kill the animals by surrounding one band at a time and completely destroying each member of it. In this way no alarm is communicated to the neighboring bands, which often remains quiet almost in sight of the scene of slaughter. For us to have continued on then would have been an act for which certain death would have been inflicted on a like number of their own tribe had they done it; for we might have deflected the whole range of the buffalo fifty or one hundred miles to the west, and prevented the Indians from laying in their winter store of provisions and skins on which their comfort, if not their lives, depended. Their feelings toward us, under the circumstances, were not unlike what we should feel toward a person who would insist upon setting fire to our barns.

“The most violent of them were for immediate resistance when I told them of my intentions; and those who were most friendly, and in greatest fear of the power of

the United States, begged that I would 'take pity' on them and not proceed. I felt that, aside from its being an unnecessary risk to subject my party and the interest of the expedition to, it was almost cruelty to the Indians to drive them to commit any desperate act, which would call for chastisement from the Government.

"But this was not the only reason they urged against our proceeding. They said that the treaty made with General Harney gave to the whites the privilege of traveling on the Platte and along the White river, between Fort Pierre and Laramie, and to make roads there, and to travel up and down the Missouri in boats; but that it guaranteed to them that no white people should travel elsewhere in their country, and thus frighten away the buffalo by their careless manner of hunting them. And, finally, that my party was there to examine the country to ascertain if it was of any value to the whites, and to discover roads through it, and places for military posts; and that having given up already all the country that they could spare, these Black Hills must be left wholly to themselves. Moreover, if none of these things should occur, our passing through their country would give us a knowledge of the character and the proper way to traverse it in the event of another war between themselves and the troops. I was necessarily compelled to admit to myself the truth and force of these objections.

"The Indians whom I first met were the Minikanyes, to the number of forty lodges, near whom, as they were very friendly, we encamped. They were soon joined by the warriors of a large camp of Unkpapas and Sihasapas and our position, which was sufficiently unpleasant in the presence of such a numerous party of half-avowed enemies, was rendered doubly so by a storm of sleet and snow, which lasted two days and nights, and against which we had but little protection.

"A young Indian who had accompanied us from Fort Laramie, considered the danger to us so imminent that he forsook our camp and joined his friends, the Minikanyes. Under these embarrassing circumstances my associates evinced the

most resolute bravery and determination to abide the result like true men. I consented to wait three days without advancing, in order to meet their great warrior, Bear's Rib, appointed First Chief by General Harney's treaty, merely changing our position to one offering greater facilities for defense. At the expiration of the time, Bear's Rib not making his appearance, we broke up camp, and, traveling back on our route about forty miles, struck off to the eastward, through the southern part of these mountains. The point where we turned back is well marked by the Inyan Kaya Peak, whose position was fixed by us.

“After we had proceeded two days on our journey eastward, we were overtaken by Bear's Rib and one other Indian who accompanied him. He reiterated all that had been said by the other chiefs, and added that he could do nothing to prevent our being destroyed if we attempted to proceed farther. I then told him that I believed him to be our friend, but that if he could do nothing for us he had better return to his people and leave us to take care of ourselves, as I was determined to proceed as far as Bear Butte.

“After a whole day spent in deliberation, he concluded to accompany us a part of the way, and he said he would then return to his people and use his influence to have us not molested. In return for this he wished me to say to the President and to the white people that they could not be allowed to come into that country; that if the presents sent were to purchase such a right they did not want them. All they asked of the white people was to be left to themselves and be let alone; that if the presents were sent to induce them not to go to war with the Crows and their other enemies, they did not wish them.

“War with them was not only a necessity, but a pastime. He said General Harney had told them not to go to war and yet he was all the time going to war himself (Bear's Rib knew that when General Harney left the Sioux country he had gone to the war in Florida, and was at the time in command of the army sent against the Mormons).

He said moreover that the annuities scarcely paid for going after them; and that if they were not distributed to them while they were on their visit to the trading posts on the Missouri to dispose of their robes, they did not want them.

“It is a fact that for several years, owing to this cause, these Indians have not come in for their goods at all.

“He said that he heard that the Ihanktonwans were going to sell their lands to the whites. If they did so, he wished them informed that they could not come on his people’s lands. They must stay with the whites. Every day the Ihanktonwans were coming there but were always turned back. Whatever may have been Bear’s Rib actions after leaving us it is certain we saw no more Indians in the Black Hills.

“We completed our reconnoissance along the eastern portion of these mountains as far as Bear peak, which forms another convenient and accurate point with which any future reconnoissance may connect with our own. We also visited the north fork of the Cheyenne (the Belle Fourche), in this vicinity. On our return we took a south-east direction, striking the south fork of the Cheyenne at the mouth of Sage creek. We then proceeded up the south fork to French creek; thence southeast, through the Bad Lands, to White river; thence along the sources of White Clay creek and Porcupine creek; and thence to Niobrara, striking it in longitude $102^{\circ}-03'$.”

CHAPTER III.

CAPTAIN W. F. RAYNOLDS’ EXPEDITION.

This expedition started from St. Louis, May 28, 1859, by steamer, passed up the Missouri to Fort Pierre, and left the river at that point June 28, 1859, having for its object the examination of the headwaters of the Yellowstone and

Missouri rivers, and of the mountains in which they have their sources.

Leaving Fort Pierre the expedition went westward, skirting the northern slopes of the Black Hills to the waters of the Powder river; down that stream to within forty miles of the Yellowstone; thence westward to that river, below the mouth of the Big Horn; thence southward to the Platte, by two routes, one up the Big Horn, skirting the eastern base of the Big Horn Mountains, the other from 20 to 50 miles further east. The expedition wintered at Deer creek on the North Platte.

From winter-quarters to the three forks of the Missouri the expedition was divided. One party passed up the Wind river with the intention to reach the headwaters of the Yellowstone, but was compelled by impassable mountains to cross to the headwaters of the Columbia, near the sources of the Colorado; thence along the west side to Henry Lake; thence down the Madison to the three forks of the Missouri. The second party passed through the valley of the Big Horn to the lower canyon; thence westward, by the Yellowstone and Gallatin to the three forks of the Missouri; thence to the mouth of the Yellowstone by three routes — the first by way of the Yellowstone; the second overland, on the east side of the Missouri to Fort Benton; thence by the Missouri; and the third overland from Fort Benton, following approximately the line separating the waters of the Yellowstone and Missouri rivers. From the mouth of the Yellowstone, part of the expedition descended the Missouri in boats to Omaha, and the remainder reached that place by a route never passed before on the west side of the Missouri.

The following is part of the report of Captain Reynolds: —

“ The country claimed by the Great Sioux or Dakota nation, prior to the organization of the Territories of Nebraska, Dakota and Minnesota, was very extensive. Commencing on the northeastern limit at Lac qui Parle, an

imaginary line would run in a northwest direction, taking in Lac du Diable, thence inclining south by west, including Turtle Mountain and the head of Pembina river, would strike the Missouri river at the mouth of Apple river, below the Gros Ventres village. Crossing the Missouri, it would proceed up the Grand river of the Arikaras (or even some distance west of this river), bearing west by south until reaching near the head of Powder river. From this point it would continue along the range of mountains called the Black Hills in a southern direction, until reaching Fort Laramie on the Platte, thence down that river for some distance, afterwards extending east to the junction of the Niobrara with the Missouri river, thence down that stream to the mouth of the Big Sioux river, this being the boundary line to which their claims had been extinguished by the United States. Proceeding along the Big Sioux river inclining northeast, taking in the Vermilion and James rivers, their lands would terminate by a junction with the starting point at Lac qui Parle. The United States has purchased of the Indians most of the territory comprised within the above limits.

“ That portion of their lands east and north of the Missouri is quite sterile, and with the exception of some coulees and hills, formed by the rivers and creeks, presents a most monotonous prairie, many hundred miles in length and breadth, very level, and devoid of trees, or even shrubs. The soil is loose and sandy, grass rather thin, and in no great variety, that known as the short, curly, buffalo grass being the most abundant. In former times, this was the great range for the buffalo, but of late years, they are found in greater numbers west of the Missouri. The soil is generally too dry for agricultural purposes, except along the borders of streams, where it is for the most part quite fertile. In some parts where the vegetation is luxuriant, the grass is very nutritious, and would, in common with most of the Northwest Territory, afford good grazing for horses, horned cattle, and sheep. Small lakes are to be met with in this region, from which the Indians get their sup-

ply of water when traveling across the prairies, which they do not attempt to do except in the summer and autumn, when the "buffalo chips" answer the purpose of fuel. The terrible snow storms that sweep over these plains in the winter, compel them to place their camps along the rivers where timber is to be found. Along the Coteau de Prairie, or dividing ridge between the waters of Iowa and Missouri, near the source of James river, is found the celebrated Red Pipestone quarry, to which the Indians pay yearly visits, to procure materials from which to make their pipes. This material is found in no other portion of their country, and is considered by them of great value.

"The surface of this country west and south of the Missouri river, is more rolling and diversified, on account of the large streams that course their way through it. The principal rivers on that side of the Missouri are Niobrara, White Medicine, Teton, Big Shyenne, Moreau, Cannonball, Heart, and Grand rivers. Most of these streams have been navigated by the traders with skin boats during the spring thaws. They are well timbered along their banks, the trees growing in large groves or points, frequently reaching from one bluff to the other, the whole width of the valley. The largest and most common trees are the cottonwood, elm, and ash, though others of smaller growth are found. Though there are many tributaries to the rivers named, running through the interior, most of them are short, and only convey the water produced by rain or snow to the parent stream. These are termed by the traders and voyageurs *coulées*, seldom extending more than from one to three miles in length, and usually covered with various bushes, small trees, grass, and weeds. Between rivers, and beyond the heads of the *coulées* or dry valleys are large tracts of table land, from ten to fifty miles in breadth, on which no timber is seen, but where the spontaneous grasses are very thick, and of excellent quality. It is in such spots as these that the buffalo delight to remain undisturbed, quietly cropping the choice blades in happy ignorance of the hordes of hunters roving

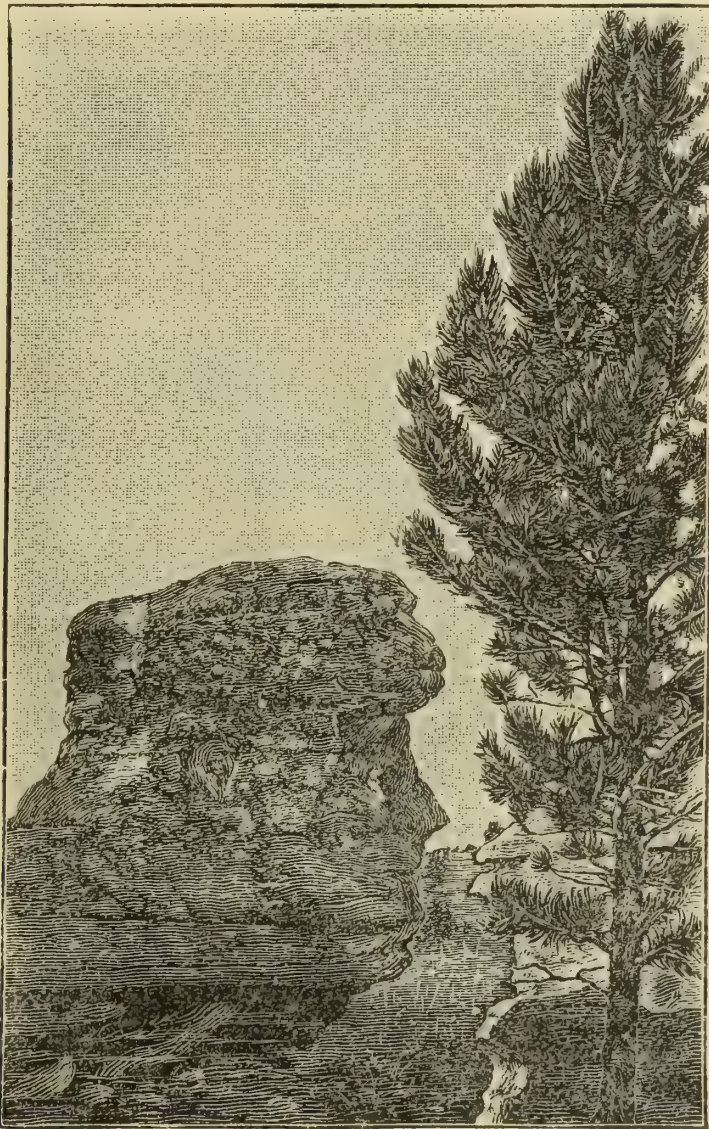
through the country. Springs impregnated with saline substance are often met with, and the water is drank with eagerness by these animals.

“The most fertile region, however, and the one approaching nearest to a habitable district, is on the headwaters of the Cheyenne and Moreau rivers, commencing at the eastern base of the Black Hills, and running northeast for a distance of sixty or eighty miles. The prairies here are undulating, well-wooded, well-watered, and present much varied, beautiful and enlivening scenery to the eye of the traveler. Indeed, with but the exception of that portion of the Dakota lands situated west of the ‘Mauvais Terres’ or ‘Bad Lands,’ on the source of the White river, the rest cannot be regarded as an entirely barren district, though to what extent grain could be produced has not been determined.

“Many fabulous stories in regard to the Black Hills are related by the Indians, and are believed by them even to this day. They say that rumbling noises, like the sound of distant thunder, are not infrequent, and one of the principal peaks is called by them the Hill of Thunder. In 1833 they supposed it to be on fire, and on almost any clear day they say large volumes of smoke could be seen, which they regarded as the breathing of the great white man buried beneath. Unnatural noises are said to be heard, which, whether originating in their fancy, or caused by wild beasts, are thought to be the moans of the great white giant when pressed upon by rocks, as a punishment for being the first aggressor on their territory. They say that he issues forth occasionally, and his tracks seen in the snow are twenty feet in length. He is condemned to perpetual incarceration under the mountain as an example to all white men to leave the Indians in quiet possession of their hunting grounds. This story, though fabulous, shows their ancient and intense repugnance to the encroachments of other and distinct races.

“Southeast of the Black Hills is a large area of country known as the Mauvais Terres, or Bad Lands, which is

very remarkable for its unique scenery and the organic remains entombed in its strata. The portion of country to which this name has been especially applied is about one hundred and fifty miles in length, and sixty miles in width. There are many other portions of the Northwest to which



THE OLD MAN OF THE PARK.

this term is applicable, but no other area so large possesses this uniform character. It is hardly possible to describe this singular country. Along White river, for sixty miles in length and fifteen to twenty miles in breadth, the country presents the appearance in the distance of one vast city, and but little imagination is required to see immense public edifices, towers, churches, etc., with people on their

summits. What tends to make the illusion more perfect, is that the mountain sheep (*Ovis montana*), sometimes alone and sometimes in small bands, are seen on the tops of these towers, several hundred feet high, and entirely inaccessible to the approach of man. Here they remain in security rolling their large horns from side to side, and casting suspicious glances at the traveler below.

“It is somewhat strange that this animal should prefer the most rugged and inaccessible places where scarcely a spear of grass is seen, and no shrubs but here and there a solitary bunch of stunted sage. A few small grassy spots, like oases, are found in this region low down at the base of these lofty ridges and towers, to which the mountain sheep descend early in the morning to feed. Although the absence of vegetation in their favorite places of resort would induce the belief that they fared badly, yet when killed they are invariably fat, and the meat is superior even to that of our domestic sheep. The Indians prize it next to the meat of the buffalo. The road from Fort Pierre across the country to Fort Laramie runs directly through this region, and is the only road that can be traveled with safety with carts or wagons.

“In the spring of 1855, the writer passed up the valley of White River with carts, but scarcely a day passed that they were not upset, and their contents more or less injured. Water is very scarce, though a few springs and small streams occur, and these are of great importance to the Indian as he winds his way through this region. But the objects of the greatest interest to the scientific man, and curiosity to the Indian and voyageur, are the organic remains which abound here. They consist for the most part of the remains of vertebrata, which have been described by Prof. Joseph Leidy in the Proceedings of the Academy of Natural Sciences, Philadelphia. They all belong to extinct species, representing with a good degree of completeness the mammalian fauna of a district. All the remains of turtles appear to belong to a single species, but the individuals are very numerous and

of large size, some of which were estimated to weigh from five hundred to one thousand pounds.

“The materials of which the rocks are composed are light colored clay, grits, and marls, more or less indurated, and worn into these fantastic shapes by atmospheric agencies. The presence of land and fresh-water shells and the absence of all indications of marine origin, show this region to have been a vast inland lake some time during the Miocene Tertiary period. For some distance up the White River Valley from its mouth, the country is very fine, and clothed with an excellent growth of vegetation, but towards its source for two or three days' march the sandy desert prevails, and traveling is very difficult.

“Passing across the country to the Niobrara, toward the Platte, the prairie assumes its usual character, and traveling is much better; and though much of that region is occupied by patches of bad lands and denuded places, still the greater portion is clothed with good grass, and has a cheerful appearance. Along the Platte, Loup Fork, and portions of the Niobrara, are the Sand Hills, a large area of not less than twenty thousand square miles, composed of loose sand, which has been thrown up into hills and ridges fifty to two hundred feet in height by the wind.

“The material is derived from the eroded portions of the more recent Tertiary beds in this region, and as the winds are mostly from the west and northwest, this loose sand is slowly moving onward toward the east and southeast. Though totally unfit for agricultural purposes, this tract of country cannot be said to be destitute of vegetation. In the valleys and depressions among the hills are many fine spots of grass, and sometimes the hills are covered with varieties of grass adapted to so meager a soil. The soap plant, *Yucca angustifolia*, grows here very abundantly, and sending its roots deep into these sandy hills, protects them from being diminished by the winds. The sand plum, *Prinus pumila*, grows very abundantly all through the Sand Hills, and supplies an astringent but not unpalatable fruit.

“On the head of Loup Fork, and between that stream and the Niobrara at various localities, are numerous saline and fresh-water lakes. The fresh-water lakes contain a great profusion of various species of water-plants and their peculiar animal life, while those that are impregnated with saline matter present the appearance of desolation, no vegetation growing in their vicinity except a few weeds adapted to a saline soil. In former years these Sand Hills were a famous resort for the buffalo, and even at this time a few may be found, but they have been for the most part driven away by the Indians to other and less frequented parts.

“Among the many objects which come under the observation of travelers in the Dakota country, none are of more interest than the numerous villages of the prairie dog, scattered all over the dry and gravelly plains. Sometimes they are situated upon the high terraces along the rivers, but generally they are upon the high, arid plains, many miles from water. A good deal of a fabulous character has been written in regard to the habits and habitations of this little animal. Some have even observed a council-house in the center of the village, which is supposed to be laid out in regular streets, reserving a public square for meetings and discussions for the general good of the community. Others have imagined a particular large, sleek dog to be the chief, and contend that they have seen him receive visits and apparently give directions to many of the citizens, who, after receiving the same, departed to give others an opportunity to state their requests.

“With a zeal for knowledge, and a perseverance in labor, truly creditable in many respects, attempts have been made to dig to the bottom of their subterranean abodes, as well as to drown them out, but most of these experiments have resulted in failure. It does not occur to the laborious hunters that the dog can dig as well as they, and that if their holes are so constructed as not to be affected by the heavy rains that fall on the level places, where their villages are always situated, they would not be likely to be disturbed by a few pails of water.

“The truth is, the animal does not dig deep, seldom more than four or five feet, but penetrates the earth in a horizontal direction. It lays up no stock of provisions for the winter, but lives on the roots of grass, which it reaches by digging up toward the surface when the ground is covered with snow. This explains their extensive burrowing in different directions, seeking support, and crossing each other’s routes in many places, leading persons to suppose their different chambers are thus connected for convenience, to associate and talk over their national and domestic affairs during the long winter evenings. The uncertainty of success in digging them out is thus seen, and a man might continue his excavations for miles without securing the inhabitant.

“The dog must have food, and having but little hair upon his body cannot endure the cold on the surface, therefore he finds his food below it in winter, and in his subterranean travels comes across others of his village friends engaged in the same pursuit. In this manner they destroy in the course of time all the vegetation in their immediate vicinity, and are obliged to remove to some other locality, and abandon their holes to the owls and rattlesnakes.”

CHAPTER IV.

THE SIOUX AND UNITED STATES FROM 1825 TO 1874.

In 1825 our Government made a treaty with the Teton, Yankton and Yanktonias-Sioux, promising them protection and such benefits and acts of kindness as may be convenient and the President may think just and proper.

The discovery of gold in California led to a vast emigration over the plains, which by driving off and destroying the game, was injurious to the Indians, and in September, 1851, commissioners of the government called together the Sioux, or Dakotas, Cheyennes, and most of

the other tribes southwest of the Missouri and east of the Rocky Mountains, and at Fort Laramie made a treaty with them. The Indians ceded none of their hunting grounds at this time, but granted the right to establish roads and military posts within their limits, and promised to abstain from hostilities. The U. S. commissioners promised the Indians protection from the commission of all depredations by the people of the United States, and \$50,000 a year for fifty years.

When the treaty came before the Senate this body struck out fifty and inserted ten years. This amendment was never submitted to the Indians. Not long after gold was found in the mountains of Colorado, and our people rushed in and seized on the best part of it, in violation of the treaty.

In February, 1861, the Indians at Fort Wise, Kansas, were asked for and ceded enough of their possession to make two great States in the Union, retaining only a small district for themselves. The Sioux were not party to this treaty but the Cheyenne were. They continued peaceable until April, 1864, when, on a false report, they were attacked in their camp at daylight, many of them killed, and their property destroyed, and in November following, a camp of about 500 men, women and children, who had been persuaded to camp near Fort Lyon, under promise of protection, were surrounded by the cavalry under Colonel Chivington. All he caught were horribly massacred. A war ensued which cost the U. S. Government thirty millions of dollars, and brought conflagration and death on the border settlements.

The utter futility of conquering a peace having been demonstrated, peaceful agencies were resorted to, General Harney, Sanborn and others were appointed for the purpose, and in October, 1865, succeeded in getting the Indians to sign a treaty, when the war instantly ceased.

Previous to the signing of this treaty gold had been discovered in Montana, and emigrants and explorers were pressing through every part of the Dakotas west of the

Missouri, killing and scaring the game. So when the Indians were assembled to make a new treaty or to renew the old one, they remonstrated against this, insisting that the right to make roads, etc., formerly granted, had reference only to the country south of the Platte, and many of the chiefs in signing the treaty protested, saying, "the emigrants must either go south of the Platte, or north of the Missouri, for it would be ruinous to them, if it passed where they were accustomed to camp in winter, namely, near the Black Hills, or the country drained by the Powder river and Big Horn; and a part of their people who occupied that country would not suffer emigrants to pass through it." They nevertheless abstained from hostilities during the following winter, though suffering severely, as they believed, in consequence of the white man's incroaching upon them.

The commissioners who made the treaty in 1865, in their report say: "Before these routes between the Platte and Yellowstone are established, and occupied by our people, justice to the Indians and safety to the whites, in our judgment, require some arrangement in the form of compensation to those tribes that now depend on the game of that country for clothing and subsistence." (See Report of Secretary of Indian Affairs, 1866, page 172.)

No such arrangement was made. In March, 1866, Gen. Pope, commanding the Department of the Missouri, issued an order to establish military posts near the base of the Big Horn Mountains, and on or near the Yellowstone on the new route to Montana. In June, Col. Carrington, in command of the 18th Infantry, was ordered to garrison Forts Reno, Phil Kearney, and C. F. Smith, in the country which the Dakotas refused to yield. They protested in vain.

In the meantime the Civil War was finished, and thousands of emigrants rushed through the country. In July the U. S. troops having proceeded to occupy the country, war commenced, which culminated on the 21st of December in the destruction of Lieut.-Col. Fetterman and his soldiers.

The Sioux having thus shown their ability, as well as will, to hold the country, in July following, Congress determined to endeavor to obtain by peaceful means what the army was unable to gain by war, and passed an act to appoint what has been called the Peace Commissioners, which act was approved July 20th, 1867. Men of the highest standing in our nation were appointed on this commission, namely: the Commissioner of Indian Affairs, the Chairman of Senate Committee of Indian Affairs, Gen. Sherman, Gen. Kearney, etc.

This commission succeeded in making treaties with some bands of the Sioux, but could not induce those organized in active hostilities to come to the council, namely the Sioux and Cheyenne of the North. Red Cloud, then regarded as the principal chief, sent them word that his war against the whites was to save the Powder river valley and the Black Hills, the only hunting grounds left them from intrusion. That whenever the military garrisons at Fort Phil. Kearney and Fort C. F. Smith were withdrawn, the war on his part would cease, and he would then meet them in council.

The commissioners in their report show that garrisons were sustained there at great expense, and utterly failed to accomplish the object for which they were established and recommended that the demands of the Indians be complied with. The next year, in accordance with these recommendations, a treaty was made and signed by Red Cloud, and the garrisons withdrawn, and the war ceased.

The commissioner of Indian affairs in his report for 1875, page 5, speaking of this treaty, says: "The treaty of 1868 also stipulated that the country north of the Platte river, in Nebraska, and east of the summit of the Big Horn Mountains in Wyoming, should be held and considered unceded Indian territory, and no white person or persons should be permitted to settle upon or occupy any portion of the same, nor without the consent of the Indians first had or obtained, should pass through the same.

"The Sioux have constantly affirmed that this provision

was applicable to what is called their permanent reservation, and to all the country west of it to the Yellowstone river, including what is called the Powder river country. The withdrawal of our garrisons from that country, and other facts not necessary to be mentioned here, show that officers of our government so understood it."

If we had observed this treaty as faithfully as the Dakotas, we would have had no wars with them from that day till now. The treaty was made as early in 1868, as the Indians could be got together. We find that in a report made by Gen. W. S. Harney (one of the commissioners who made the treaty) Nov. 23, 1868, then in charge of the Sioux Indians, says: "I am perfectly satisfied with the success which has attended the commencement of this work, and can unhesitatingly declare that to secure perpetual peace with the Sioux Indians it is only necessary to fulfill the terms of the treaty made by the Peace Commission."

This commission, in their report to the President of the United States, says: "If the lands of the white man are taken, civilization justifies him in resisting the invader. Civilization does more than this—it brands him a coward and a slave if he submits to the wrong. Disregarding this and the articles of the treaty which acknowledged the rights of the Dakotas to hunt south of the North Platte for many years, and forbids any of our soldiers going north of it, on the unceded lands, in June, 1869, Gen. Sheridan, in an official order, says: 'All Indians outside of the well-defined limits of their proper reservations are under the original and exclusive jurisdiction of the military authority, and as a rule will be considered hostile.'"

Treating these Indians as enemies in the unceded territory south and west of the reservation which was solemnly promised not to be invaded, led to some conflicts but not to war.

In 1874, General Custer made an expedition to the Black Hills. It was done in plain direct violation of the treaty. The Sioux protested as strongly as they could in words, declaring that its object was stealing their lands. The

Indians viewed Custer and his followers as spies who might justly be put to death. But as he was a great military chief, and proclaimed that he came peaceably and would do them no harm unless they began the war, they did not molest him or his followers.

CHAPTER V.

CUSTER'S EXPEDITION.

The expedition under command of Lieut. Col. G. A. Custer was organized in pursuance of special orders No. 117, Headquarters Department of Dakota, June 8, 1874, and had for its purpose the reconnoitering of a route from Fort Abraham Lincoln to Bear Butte, in the Black Hills, and exploring the country south, southeast, and southwest of that point. The expedition consisted of ten companies of cavalry, two of infantry, and a number of Indian scouts, in all about 1,000 men, one guide, interpreters and teamsters. Captain Ludlow was detailed as its engineer officer.

The line of reconnoissance (1204 miles in length) commenced July 2, moving southwestwardly toward the bend of Heart river; thence across the north fork of the Cannon Ball; thence across the south fork called also Cedar creek; thence over the Belle Pierres Hills; thence into the valley of the north fork of Grand river; following this valley for a distance, the trail bore to the southwest, across several bends of the south fork of Grand river, to a camp on a small branch of the Little Missouri; from this point, called Prospect Valley, the trail led around the northern extremity of the Short Pine Hills, into the valley of the Little Missouri; thence southeasterly in the direction of Bear Butte; camp was made on a small branch of the Belle Fourche, the valley of which stream was reached at a point 292 miles from Fort Lincoln; thence by Redwater creek, a tributary of the Belle Fourche, into the Black Hills; thence to Inyan

Kara creek, after the peak of that name, which was here ascended, and near the source of which exploring parties were sent in various directions; thence camp was made in Castle Valley Creek; thence southeasterly to an unnamed creek, from whence Harney Peak was ascended; from this point reconnoissances were made to the south and southeast, towards the plains, rendezvous being again made in the heart of the Black Hills.

On August the 6th camp was broken for the return trip, which followed partly the incoming route, to determine the practicability of a road northward through the Hills; emerging near Bear Butte, Castle Valley and Elkhorn Prairie were retraversed, whence the plains were reached, and a trail reconnoitered over a different route, returning to Fort Lincoln, which point was reached August 30, the sixtieth day of the trip.

I subjoin here the full report as far as the same is of assistance to future historians, and I beg the reader's pardon and patience if some things are said in the report which he is already well aware of: —

HEADQUARTERS DEPARTMENT OF DAKOTA. }
 OFFICE OF CHIEF ENGINEER. }
St. Paul, Minn., April 28, 1875. }

“ Sir: — I have the honor to submit herewith my report of the reconnoissance of last summer to the Black Hills. Accompanying the report are those of Prof. N. H. Winchell and Mr. George Bird Grinnell, and a summary of the daily instrumental observations with deduced altitudes and the latitude of each camp, distances traveled, etc. Two maps are submitted, one of the whole reconnoissance, the other more in detail of the Black Hills themselves.

ORGANIZATION OF THE EXPEDITION.

“ The expedition was organized in compliance with the following order, the provisions of which were subsequently slightly modified, as far as they related to myself by Special

Order No. 127, June 19, which directed me to accompany the expedition and take six instead of three of the enlisted men under my command.

SPECIAL ORDER No. 127. }
HEADQUARTERS DEPARTMENT OF DAKOTA. }
St. Paul, Minn., June 8, 1874. }

“ 1. In pursuance of instructions from Headquarters of the Military Division of the Missouri an expedition will be organized at Fort Abraham Lincoln, D. T., for the purpose of reconnoitering a route from that post to Bear Butte in the Black Hills, and exploring the country south, southeast and southwest of that point. The expedition will consist of the six companies of the Seventh Cavalry, now stationed at Fort Abraham Lincoln, the four companies of the same regiment now at Fort Rice, Company I, Twentieth Infantry, Company G, Seventeenth Infantry and such other Indian scouts from Forts Abraham Lincoln and Rice, as the commander of the expedition shall select.

“ Lieut.-Col. G. A. Custer of the Seventh Cavalry is assigned to the command.

“ The expedition will start from Fort Abraham Lincoln as soon after the 20th instant as may be practicable. Lieutenant-Colonel Custer will proceed by such route as he may find most desirable to Bear Butte, or some other point on or near the Belle Fourche, and thence will push the explorations in such direction or directions as in his judgment will enable him to obtain the most information in regard to the character of the country and the possible routes of communication through it.

“ Lieutenant-Colonel Custer will return to Fort Abraham Lincoln within sixty days from the time of his departure from it. Should, however, any unforeseen obstacles render it necessary or advisable for him to return from any point of his contemplated march, even before the Belle Fourche is reached, he is authorized to do so. Capt. William Ludlow, Chief Engineer of the Department, will report to Lieut. Col. Custer as engineer officer of the expedition. He will

be accompanied by his civil assistant and three enlisted men of the Engineer Battalion.

“ By command of

“ BRIGADIER-GENERAL TERRY.

“ O. D. GREENE,

“ Assistant Adjutant-General.

GENERAL ACCOUNT OF THE COUNTRY.

“ Some general account of the country about to be explored will be useful to a full understanding of the objects of the expedition, as set forth in this order.

“ The Black Hills are an outlying portion of the Rocky Mountains covering an area about equal to that of the State of Connecticut, included between the forty-third and forty-fifth parallels of latitude and the one hundred and third and one hundred and fifth meridians of longitude. They lie therefore mostly within the borders of Dakota, but trench also upon those of Wyoming.

“ On the north, east and south sides they are surrounded by the open prairie and are accessible by a journey of a hundred or more miles from the nearest point, which even frontier civilization has reached. This region had been explored by Lieutenant Warren of the Topographical Engineers in 1855, 1856 and 1857, and by Captain Reynolds of the same corps in 1859 and 1860, and the maps and reports of these officers nearly summed up our knowledge of it, if we except the vague and sometimes highly colored reports of Indians and stray frontiersmen.

“ The north and south forks of the Big Cheyenne river head nearly together on the west side, thence spreading widely apart, embrace the hills between them, uniting in longitude 102 D. 20 M. to flow eastward and discharge into the Missouri.

“ The immediate reservation, secured to the various bands of Sioux, now the most numerous and warlike of the northern tribes, by treaty of April 29, 1868, lies between the one hundred and fourth meridian of longitude and the Missouri river. It is bounded on the north by the forty-

sixth and on the south by the forty-third parallel, the Keya-Poha river [a branch of the Niobrara], and the Niobrara itself to its confluence with the Missouri.

“This immense tract, inclosing nearly forty-three thousand square miles, the greater portion of which, however, is bare and often arid prairie, destitute of every attraction for the settler, and only capable of supporting a scanty population of hunters, has for its choicest and most valuable portion the Black Hills, lying on its western border. All reports agreed in describing this as a mountainous, heavily timbered tract, abounding in game and containing within its unexplored interior an open, fertile and well watered region.

“In case at any future time complications with the Sioux or the advancing needs of bordering civilization should make it necessary to establish military posts upon this Indian reservation, indications all pointed to the Black Hills as the suitable point, both on account of their geographical position and on the abundance of wood, water and grass to be found there. To explain the value of its position, it should be stated that the trails from the camp of the hostile Sioux on the Yellowstone to the agencies near the Missouri, where live the Reservation Indians and where the issues of annuities are made, lead by a southeasterly course through the hills, the abundance of game and ample security of which, make them a ready refuge in time of war and a noble hunting ground in time of peace.

“It was therefore considered desirable to gain positive information regarding them and to connect them as well by reconnoissance with the posts of Lincoln and Laramie. To accomplish these results was the object of this expedition.

“The personnel of this consisted of ten companies of Seventh Cavalry, one each of the Twentieth and Seventeenth Infantry, a detachment of sixty-five Indian scouts, together with the necessary guides, interpreters, teamsters, in all about one thousand men. The wagon train consisted of about one hundred and ten wagons and ambulances,

while the artillery was represented by a battery consisting of one Napoleon, three Gatling and one three-inch rifle. Previous to leaving St. Paul, I had engaged the services of Prof. N. H. Winchell, State geologist of Minnesota, as geologist of the expedition. He would also make such notes, as his time would admit, on the flora, in which Dr. Williams, surgeon U. S. A., kindly promised to assist.

“ Mr. George Bird Grinnell, of New Haven, accompanied the expedition as a representative of Professor Marsh, of Yale College, and I arranged with him to furnish me a report on the paleontology and zoology. The valuable reports of these two gentlemen are appended and special attention to them invited.

“ A photographer was engaged in St. Paul and furnished with a complete apparatus for taking stereoscopic views. He agreed in consideration of using government material and being furnished with other facilities, to make six complete sets of pictures upon return to St. Paul to accompany the official reports. About sixty excellent views were taken, illustrating vividly the character of the country. But one incomplete set of pictures were furnished me, which is forwarded herewith. The photographer failed and subsequently refused to furnish more and an attempt to compel him to do so, was defeated.

“ For surveying purposes my detachment of six engineer soldiers was employed. The two sergeants, Becker and Wilson, each with one man as an assistant, kept separate trails with prismatic compass and odometer, one with an odometer cart, a two-wheeled vehicle specially constructed for the purpose, the other in an ambulance. Two odometers were read on each vehicle and the compass-notes made as full as possible. Two chronometers [mean solar 1362, Arnold and Dent, and Sidereal 202, Bond & Sons] were carried by the fifth man in a basket, while a record of the thermometer and aneroid barometer readings was made by the sixth man during the day.

“ The additional instruments were a small Wurdeman transit, No. 94, and a Spencer, Browning & Co. sextant,

No. 6536. The general topography during the day was taken as thoroughly as possible by my assistant, Mr. W. H. Wood and myself, and night observations were made whenever practicable. The position of all but ten of the camps were astronomically determined. A summary of these is appended.

“The direct course to Bear Butte, which is a well known point north of the Black Hills, is south $39\frac{1}{2}$ degrees west and the air line distance two hundred and two miles. As it was known that the intervening country was dry and woodless, General Custer considered, that by inclining westward toward the divide east of the little Missouri and then turning south a better road would be found than by pursuing the straight course. Prairie travel resembles that by sea, which indeed the landscape not unfrequently suggests. The compass is the guide, the direct course is not always the best, and the probabilities of finding wood, water and grass, and a good road compare with those of obtaining favorable and moderate winds and a smooth sea.

“The Dakota prairies have been often described but their general characteristics may be briefly stated: a rolling and at times a hilly country, destitute of wood except small quantities in the eroded valleys of streams and covered with short grass. The horizon, bounded everywhere by the undulating outlines of the surface, and varied occasionally by some more dominating elevations which constitute the landmarks for the travelers, and are called “Buttes.” The summer sun shines from a generally cloudless sky, the purity of the air gives its rays great power and the thermometer frequently arises above 100 deg. in the shade. Water is scarce and almost invariably alkaline even in running streams from the presence of a salt which forms a compound of the clayey soil. The rivers are small streams of great comparative length, which from absorption and evaporation shrink in their downward course and are frequently dry at their mouths while flowing freely a hundred or two miles above. The seasons of spring and fall are exceedingly brief. The winter snows

are rapidly disposed of in the spring and rainfalls are unfrequent until cold weather in the fall, which soon again merges into winter. By July 1st the grass is fully grown and in another month has turned dry and yellow, cured to hay upon the ground and readily burned.

“ The whole country was once ranged over by enormous herds of buffaloes, whose trails are everywhere visible, but which are now seldom or never found east of Little Missouri, and the only game animals inhabiting the vast waste are antelope, numbers of which were seen during every day's march. The grasshopper having proved himself to be one of the most serious obstacles to the future successful colonization of the country is worth brief mention.

“ Previous to the departure of the expedition and while still in camp near Fort Lincoln during the last days of June, the grasshoppers were very numerous. I counted twenty-five one morning on what I judged to be an average square foot of ground; a brief calculation gives at that rate over a million to the acre, and as they are often much more numerous than observed, and are exceedingly rapacious, their capacity for destruction to living vegetation may be imagined. Their powers of sustained flight, too, are wonderful when one considers the build of the creature, and compares it with that of a bird. They appear able to keep the wing the whole day, always keeping with the wind and filling the air to a vast height. By shading the eyes from the direct rays of the sun, and still looking near it an idea of their vast numbers can be gained. The wings reflecting the light make them appear like tufts of cotton floating lazily with the wind and apparently increasing in numbers upward as far as the eye can reach. They will journey thus all day long for several days, settling to the ground at nightfall. In descending, through the slanting rays of the sun, they resemble a fall of huge snow-flakes. In one of our camps there must have been a hundred to the square foot. They were crowded as thickly as they could stand upon the ground and every blade of grass bore several. No successful means of destroying them or miti-

gating their ravages have been yet discovered, and the serious consequences of a visitation from them were seen last season in many portions of the West.

“The course determined upon by General Custer was successfully pursued. The expedition left Ft. Lincoln at 8 a. m. of July 2d, steering at first southwesterly toward the bend of Heart River; thence, July 7th, across the north fork of the Cannon Ball, a fine stream thirty to seventy-five feet in width, and one to two feet in depth, flowing with swift current over a shallow bed through a well wooded valley from one hundred feet to two hundred feet deep, and five hundred to one thousand yards wide; thence July 8th across the South Fork also called Cedar Creek, a smaller stream, 20 feet wide and 18 inches deep, with a rocky bed, banks from 10 to 20 feet high and valley 100 to 200 yards wide, scantily furnished with wood, thence over the Belle Pierre Hills, so called from the colored pebbles abounding there. Here bending nearly westward the trail gradually sloped into the valley of the north fork of Grand River, in which we camped July 9th. The stream was about 25 feet wide and a foot in depth, with a rapid current of muddy sweet water from recent rains above. The valley is level from one to two miles wide, defined by low hills, and supports a scanty growth of sweet grass and weeds. Wood is very scarce. The next day's march [July 10th], was still west and a little north up the valley, in which we again camped. The grasshoppers were in immense numbers during these two days. From this camp the trail bore strongly southwest, to enable us to explore a cave, of which the guides told wonderful stories. We found it, after an uphill march of twenty miles over a sterile country, covered with cactus on the eastern side of a ridge several miles in length and covered with the first pine timber we had seen. With regard to this ridge and the cave the following is a note from my itinerary:—

“The ridge presents a peculiar appearance, having a level cap of friable sandstone, which has washed and weathered

into the shape of battlements and towers. The exterior presents the appearance of a scarp and suggests strongly the ruins of an old fortified city, fairly laid out with bastions and curtains, with sallyports guarded by towers. The tendency in places is to wear into holes, large and small, which often of regular size and arrangement give the idea of embrasures and loop-holes. The scarp varies in places from 3 feet to 20 feet in height, against which lie the taillons derived from the breaking down of the sandstone walls and the washings of the superjacent clays. The 'Cave' is a hole washed out of the sandstone 200 feet or 300 feet in depth horizontally, with an entrance 15 feet by 20 feet and possesses no special interest other than that imparted to it by the superstition of the Indians.'

“ From the Cave Hills the route led southwesterly across several bends of the south fork of Grand River, through a rather difficult and arid country, to the camp of July 14th, in a well grassed and watered valley, through which flowed a small wooded branch of the Little Missouri. The view here was so attractive in comparison with the landscape recently passed over, that General Custer named the place Prospect Valley. Here the first halt was made for the purposes of rest and washing, much needed after a march of two hundred and thirty miles, and a mail was dispatched back to Fort Lincoln by Indian scouts. The camp laid between two ranges of pine-covered hills, from the southern extremity of which and due south of us, the Black Hills loomed up high and dark, and although sixty miles away, some separate peaks and elevations could be identified. The Short Pine Hills are of a soft arenaceous marl, very light in color, some 400 or 500 feet above the valley and covered with pine some 20 to 40 feet in height, except on the level top, which is seven or eight miles long by two to three and a half miles wide and shows a heavy growth of grass. Slim Butte, which has been in sight to the southeast and east for several days, appears more like a high wooded plateau than a butte and is presumably of the

same formation as the Short Pine Hills. Information from the guides indicates that a branch of the south fork of Grand River separates it into two portions. On the west side of the Short Pine Hills some fossils were discovered, regarding which the following is my note:—

“ ‘ Descended from the Hills into the Little Missouri Valley and passed by a range of bare hills of the same character as the larger ones. Examined them for fossils, and Winchell discovered two vertebræ [saurian] and a couple of turtles of great size. Vertebræ preserved, but turtles were too much decayed. A thigh-bone of one was two inches in diameter and the carapace 1 1-4 in. thick. From Prospect Valley the trail led around the northern extremity of the Short Pine Hills into the valley of the Little Missouri, which proved to be an inhospitable country enough. No grass could be seen, the vegetation was all cactus and weeds. The train watered at a bend of the river, and taking some wood, struck off southeast. Finding a little grass, we finally camped after a hot and dusty march of thirty and a half miles over the most unattractive country we had seen.’ ”

“ ‘ The Little Missouri is a rapid stream, 30 to 40 feet wide and 18 inches deep over a gravelly bed. The banks are steep and 40 feet in height, and the valley is several miles in width, with small cottonwood in the lower levels. Information from the guides pointed to the northwest corner of the Black Hills as the most favorable point of entrance, although they still insisted that an exploration was impossible, except on foot. The camp of the 16th of July being on the one hundred and fourth meridian, but little additional westing was required. ”

“ ‘ The next day’s travel [July 17] led south over a rolling prairie, tributary to the Little Missouri and partaking of the characteristic features of that valley, very little grass, cactus, and prickly pear prevailing, the soil a loose, dry clay into which the foot sank. Camp was made on the

edge of a bluff, facing south and overlooking a very rough and much tumbled country, with the Black Hills in view fifteen or twenty miles distant, and Bear Butte rising from the prairie forty miles away to the southeast. During the night heavy clouds and lightning appeared, and toward morning a heavy wind storm routed us from sleep and covered us with sand.

“ Crossing the broken country, which was deeply washed and gullied, noon of the 18th brought us to a small branch of the Belle Fourche, timbered with burr-oak and pine and strongly impregnated with iron. The cause of this was soon explained. Just beyond we found iron-ore covering a large surface and showing that we had entered upon the outer edge of the geological disturbance, which had culminated in the formation of the Black Hills. Passing the iron country the Belle Fourche was soon reached, and two or three hours were spent in looking for a practicable descent. The Hills are 500 or 600 feet in height, deeply scarred with ravines, pine and burr-oak covering the slopes. Camp was favorably selected in a clean level opening 25 or 50 feet above the river, with abundant wood, water and grass.

“ The Belle Fourche or north fork of the Cheyenne has a rapid current in a shaly bed, 30 to 50 feet wide, and from one to four feet deep, with water slightly alkaline.

“ The rocks have been strongly tilted and metamorphosed. The river valley is from half a mile to a mile in width and well timbered. Captain Reynolds' trail of 1859 passed along the crest of the Hills in rear of the camp. The guides continued to proclaim the uselessness of attempting to take wagons farther, and if they possessed any knowledge which would be valuable to us, refused to impart it. They had hitherto supposed we would skirt the Hills without seriously attempting an entrance. Finding their monitions falling on deaf ears, they realized our intention of seeing all we could.

“ July 19. The command remained in camp. The distance marched from Lincoln was two hundred and ninety-

two miles, an average of eighteen and a quarter miles per day. Heavy rain fell until 4 p. m., and the huge campfires were burning all day. Toward evening the precaution was taken of moving the wagon train across the river, in view of a possible rise during the night.

“ July 20. The first day’s journey was made into the Hills. The morning opened threateningly, but subsequently cleared. Crossing the river and bending to the westward, a winding and easy ascent was made of the opposite Hills. Reaching the summit the course was southerly over a high, gently rolling prairie, heavily grassed, with clumps of oak and pine beautifully interspersed. A ravine cut into the shale by a small stream was passed. From the sides of the cut exuded some salt of sulphur and the water was strongly impregnated with alum and possessed a decidedly inky flavor and stringency.

“ Pursuing the southerly course the high table land narrowed to a ridge, and suddenly turning to the left the trail descended into a valley thickly wooded with oak and pine. The change from the hot, dry, burned up landscape north of the Belle Fourche was wonderful. The temperature was delightful, the air laden with sweet, wild odors, the grass knee deep and exceedingly luxuriant and fresh, while wild cherries, blueberries and gooseberries abounded, as well as many varieties of flowers. All these advantages, combined with that of an abundance of pure cold water, were ours with rare exceptions until the final departure from the Hills.

“ Over a narrow ridge, into a small grassy park, thence into another, the trail led to camp facing a lofty sandstone range of hills, through which a narrow pass had admitted us, and, at the foot of which a small stream of pure water flowed eastward.

“ Soon after leaving camp next morning, July 21st, the trail winding southeast among high wooded hills emerged upon the valley of the Redwater, a branch of the Belle Fourche. The valley seemed comparatively level, the soil a bright brick-red in color, the cuts made by small streams exhibiting the same hue, traversed in places by broad white

bands of gypsum, the grass a bright green, but not luxuriant. Owing to the ravines and cuts the valley was found difficult to travel and recourse was had to a narrow ridge of hills on the right, finally descending from which we camped in the valley on a small creek, issuing from a spring of 45 deg. temperature and flowing a stream a foot wide and several inches deep. This water, delightful from its clearness and coldness, proved to have been impregnated with the gypsum veins and to be endowed with highly medicinal properties.

“July 22d. The course led southward up the Redwater valley, which is from four to ten miles in width and bounded by high hills heavily timbered with pine. The gypsum appeared in enormous quantities. One of the guides took me off to the right to see a huge mass of it, crystallized and shining beautifully in the sun. The Indians for generations have split off in passing pieces for ornaments, and by degrees cut a shoulder several feet deep on it at the level of the ground. Inyan Kara was in sight all day to the southward; approaching which the trail turned to the left around two igneous-looking peaks and reached camp on Inyan Kara creek, so called from flowing west past the foot of that peak. A heavy and well-marked pony and lodge trail led up the Redwater valley, southeasterly to the Red Cloud and Spotted Tail Agencies.

“July 23. The command remained in camp, while a party started out to make the ascent of Inyan Kara, about five miles distant. It resembles a lunar mountain, having a rim in shape of a horseshoe, one and a half miles across, with an elevated peak rising sharply from the center. The rim, 1142 feet in height above the exterior base, has a sharp edge at the summit, and falls steeply on both sides. The central peak, towering 170 feet above the rim and resembling a formation of basaltic columns, was gained by means of a narrow spur, projecting from it to the southwest. A small spring flowed from the foot of the peak out northward through the opening in the horseshoe rim. The inner space between peak and rim was heavily wooded with

clumps of pine and aspen. In the open places were found in abundance strawberries, raspberries, black and red currants, juneberries and a small red whortleberry. From the summit an extensive view might have been obtained, but the Sioux had fired the prairies to the south and west. After two hours of waiting, the smoke having only grown denser, we returned to camp.

“ July 24. The trail led up the creek valley a short distance, then turned abruptly east, climbing the Hills and winding among a succession of wooded heights and open valleys. After several hours of waiting, while search was made for a practicable descent, we started again and dropped suddenly into the valley of a small stream flowing northward into the Redwater. Ascending a few miles the stream became more full and camp was pitched.

“ July 25. The course ascended the valley to the southeast, the hills were limestone, covered with pine, and from 150 to 300 feet in height. The valley from 100 to 300 yards wide, and filled with the greatest profusion of wild flowers in almost incredible numbers and variety. General Custer named it Floral Valley. As we ascended through these beds of color, the hills became lower and tamarack and spruce appeared on the slopes. A beautiful spring was passed with a temperature of 45 1-2 deg. The valley rose rapidly, but smoothly, and the visible stream increased to four feet in width and eight or nine inches in depth, of a beautiful clearness and a swift flow. Farther up it disappeared to reappear again. It seemed to terminate in several springs, above which a dry bed only was seen. An old and deeply cut lodge trail ran up the valley, and halting the command the valleys leading out of Floral Valley, were explored. The trail is said by one of the guides to be one of the old voyageur pack-trails, and is one of the regular routes between the hostile camp on Tongue River and the agencies. Near the highest point many old camps and abandoned lodge poles were seen. Pursuing the lodge trail a spring was reached, the waters of which flowed north and east. The fog, which had been sweeping up

from the eastward, became very dense. The flowers were, if anything, more abundant than in the morning, the hills but thirty or forty feet in height, covered with pine and aspen, tamarack and spruce. The wood and open parks seemed to share the country about equally. All vegetation was luxuriant and fresh, and we had no doubt that a portion,



WHITE BULL.

at least, of the park country we were in search of had been reached. The valleys radiated in all directions, connecting with each other, and a more beautiful wild country could not be imagined. Signs of bear and deer were abundant and the woods frequently resounded with the clangorous cry of the crane.

“ July 26. Still ascending Floral Valley, the divide was reached and we almost insensibly passed into the valley of another stream, falling rapidly to the southeast. The hills became gradually higher and the valley wider. The beaver had made frequent dams and their labors occasionally added to those of the pioneers in making a road for the wagons. In the afternoon occurred the first rencontre with the Indians. A village of seven lodges, containing twenty-seven souls, was found in the valley. The men were away, peacefully engaged in hunting; the squaws in camp drying meat, cooking and other camp avocations. Red Cloud's daughter was the wife of the head man, whose name was ‘One Stab.’ General Custer was desirous they should remain and introduce us to the Hills, but the presence among our scouts of the party of Rees, with whom the Sioux wage constant war, rendered them very uneasy and toward nightfall, abandoning their camp, they made their escape. Old ‘One Stab’ was at headquarters when the flight was discovered and detained both as guide and hostage.

“ From a high hill near camp, the first well defined view was gained of Harney's Peak, twenty miles to the southeast. The position of this peak on the southeast slope of the hills, was known from Warren's map. We were nearly in the heart of the unexplored portion of the Hills and the results of energy and good management had been shown in the entire success of the expedition.

“ The high limestone ridges surrounding the camp had weathered into castellated forms of considerable grandeur and beauty and suggested the name of ‘Castle Valley.’

“ The valley itself was luxuriantly rich and grassy, a fine stream meandering through it. Just below the camp was seen a mica-schist on the bank of the creek, in bed with a nearly vertical tilt, indicating the geological depth we had reached, while pebbles and boulders of quartz were scattered over the surface in great numbers. By the courtesy of General Custer, Lieut. Edward S. Godfrey, of the Seventh Cavalry, was this day detailed to assist

me in topographical work and rendered most valuable services.

“ July 27. The command remained in camp to give time to examine the neighboring country, and the gold hunters were busy all day with shovel and pan, exploring the stream. Several surveying parties were sent out in various directions. Each tributary valley had its springs or little streams, heavily grassed and often filled with flowers. The grass in places was as high as a horse's shoulders. This portion of the Black Hills evidently never suffers from drouth. No arid places are seen except on the summit of the limestone ledges. Springs are numerous, and very cold and pure. The soil is everywhere moist and vegetation marvelously luxuriant and fresh. The altitude is great, as compared with that of the prairie, and is sufficient to materially lower the average temperature. The warm currents of air from the plains condense as they ascend the slope of the Hills and are robbed of their moisture in fog rain and heavy dews, which occur nightly. The clouds almost invariably formed in the afternoon and interfered greatly with astronomical observations.

“ July 28. The valley below us was rather too marshy for the wagons, and the easterly course led up the hills to the left, upon a high rolling prairie crossing which the Castle Valley was again encountered, here flowing northward and contracted into a wooded and impassable canyon 500 or 600 feet in depth, with another creek and valley coming in from the westward to join it. A huge pile of elkhorns of ancient date, and of which the Indians disclaimed any share in the construction, was found on the northeast part of this prairie and suggested the name of Elk Creek for it. No camp could be made there, and partly retracing our steps we camped again on Castle Valley Creek, a few miles below the camp of the day before. Another creek coming in from the south promised a road for the next day. The following note is given: —

“ ‘ After dinner made a reconnoissance with General

Custer up the creek below camp. A good road was found up the valley, which is heavily grassed and flowed for two and one-half miles. Then ascended a hill on the left and reached through some timber the open prairie I was on in the afternoon.'

"Harney's Peak was visible from the top of a high, bare hill, and the sun having just set, we were in a few minutes well rewarded for the ride of five miles. The moon was rising just over the southern shoulder of Harney and masked by heavy clouds. A patch of bright, blood-red flame was first seen, looking like a brilliant fire, and soon after another so far from the first, that it was difficult to connect the two. A portion of the moon's disk become presently visible and the origin of the flame was apparent. While it lasted the sight was superb. The moon's mass looked enormous and blood-red, with only portions of its surface visible, while the clouds just above and to the left, colored by the flame, resembled smoke drifting from an immense conflagration. The moon soon buried herself completely in the clouds, and under a rapidly darkening sky we returned to camp.

"July 29. The course led southeasterly up the valley examined the evening before, finding heavy grass with wild oats and barley and many flowers. An old, deeply worn Indian trail led up the creek, following which took up across a high prairie, exhibiting boulders of quartz, crossing a ridge at the head of a stream uncomfortably narrow, frequent bridging of the stream being necessary. Recourse was had to the hills on the right, and camp was finally made on another creek also flowing to the south and east.

"July 30. We traveled all day through a beautiful, pastoral and agricultural country, half wood, half glade, full of deer and abundantly grassed. Harney's Peak was passed eight or nine miles on the left. A few high hills were scattered about, but most of them were low. Granite appeared for the first time and the range of which Harney's

Peak is the chief, appeared granitic and very rugged. Our proximity to the outer plains in the east was evident as camp was neared. The air was milder, the grass drier and the streams contained less water. All strong indications of the vicinity of the prairie.

“ July 31. The command remained in camp while surveying parties were sent out, and the gold hunters redoubled their efforts. General Custer and myself, with Professors Winchell and Donaldson and Mr. Wood, escorted by a company of cavalry, set out to ascend Harney. A rough ride of eight or nine miles over high hills and heavily-timbered ravines, in some of which birch was seen for the first time, brought us to the foot of a granite elevation with a creek flowing eastward. Wild raspberries, unexcelled in size and flavor abounded and in the dark, wet bottoms the juneberry bushes grew to a height of ten or twelve feet, and hung full of fruit. Leaving the horses at the foot of the clear granite, the ascent was made on foot. Halting to rest and lunch, another summit two or three miles west was seen rising higher than the one we were on. Reaching the summit of this, still another several hundred feet higher and a mile more west showed that we had more work to do. A stiff climb brought us to the top, whence nothing more lofty could be seen and we stood on the most elevated portion of the hills, some 9700 feet above the sea, except that alongside of us rose a mass of granite forty feet in height with perpendicular sides that forbade an attempt to scale them without the aid of ropes and ladders. A stunted spruce was growing under its protection and a few ferns and harebells obtained sustenance near by. The view was superb, extending over the intervening peaks and hills to a broad expanse of prairie from north by east round to southwest. The course of the forks of the Cheyenne could be distinctly traced and a dim line visible to the southeast was even thought to be the hills of the White river, sixty miles distant. Bear Butte, forty odd miles to the north, was again seen over the wooded ranges, and all but Inyan Kara of the principal peaks were in view.

Two of the prominent ones I have named General Terry and General Custer.

“ The return to camp was a struggle against almost every possible obstacle, rocks, creeks, marshes, willow and aspen thickets, pine timber, dead and fallen trees, steep hillsides and precipitous ravines. Every difficulty multiplied by the darkness and with only the stars for a guide, camp was finally reached at 1:30 in the morning.

“ August 1. Camp was moved down the creek a short distance for fresh pasturage.

“ August 2. Command still in camp. There is much talk of gold and industrious search for it is making. I saw in General Custer's tent, what the miner said he had obtained during the day. Under a strong reading-glass it resembled small pinheads of fine scales and irregular shape, perhaps thirty in number. The miners expressed themselves quite confident, that if they could reach bedrock in the valley at a favorable place, plenty could be obtained by the use of the pan. General Custer determined upon a rapid scout south to the south fork of the Cheyenne for the purpose of examining the intervening country, while another party should go southeast following the creek upon which we were encamped to its junction with the same stream. These two explorations would cover considerable country and complete the examination of the south and southeastern portion of the Hills.

“ August 3. The headquarters with five companies of cavalry and a few pack mules, leaving the train and the balance of the command in camp, started on the reconnoissance, and Lieutenant Godfrey with an escort of two companies left at the same time to follow down the creek. The headquarters trail led south and southwest through the park country until the head of a creek flowing southwardly was reached. This was pursued all day, leading us at first into a narrow valley, hemmed in by high wooden hills. The character of the country changed gradually as we went south. The valley grew broader, the hills grew lower, grass dryer and timber more and more

scarce. Crossing the red-clay belt, which encircles the hills, the creek increased in size and plunged into a canyon 500 or 600 feet in depth, containing cottonwood and box elder, with scattering pine on the hills. Emerging from this into smoother country, we halted for night a few miles from the South Fork, having accomplished a march of forty-five miles.

“Reynolds, a white scout was dispatched late at night with a mail. He had about seventy-five miles in an air line to make to Laramie alone, through a country infested with Indians, with the additional disadvantage of crossing their probable routes at right angles and coming upon them suddenly. We were greatly relieved afterwards to learn that his trip had been successfully made, though not without privation.

“August 4. A ride of three miles down the creek brought us to the South Fork. We found it a shallow stream with a flat, stony and sandy bed about thirteen feet wide and a few inches deep, though evidently much broader in wet seasons. The water was alkaline with a metallic gypsum flavor. The bordering hills low with a few stunted pines. Going down stream two or three miles the course turned abruptly to the left and struck due north, passing over a high, dry prairie with occasional valleys and ravines. We entered and crossed at right angles the Red Clay Valley, finding as usual a gypsum stream in the middle and here flowing east. Having crossed another valley tending southeast, deeply cut out of the red clay, we entered pine timber again on the north side and finally halted near some big pools and springs. The day had been excessively hot. The ride of thirty miles succeeding another of forty-five was very fatiguing and many of the horses gave out. We enjoyed, however, a fine camp, with excellent grass, water and wood, and rolling ourselves in our blankets on the ground, slept without dreaming.

“August 5. Course was still northerly through timbered, hilly country, which rapidly improved into “parks,” with bright little brooks, beautiful grassy valleys and

abundant game. Granite knobs and peaks occasionally emerged from among the trees and at half-past nine we passed a huge knob, resembling a turbaned head, some two hundred feet in height, which we had seen off the eastward on the first day of the reconnoissance. About noon the permanent camp was reached after a march of twenty-five miles that day and one hundred miles in three days. Lieut. Godfrey had already returned, but had failed to reach the South Fork on account of the tortuous and canyony character of the stream he was pursuing. He had, however, been clear of the hills and mapped the country so far as he went.

“August 6. Camp was broken for the return trip. General Custer determined, instead of going eastward upon the prairie, to partly retrace his steps and examine into the practicability of a route northward through the Hills, emerging somewhere near Bear Butte, and so complete the examination of them. The old trail was accordingly run back with some slight divergence, and camp was reached just beyond the high prairie passed over July 29th. A heavy thunder storm came up during the night and the echoes among the hills were exceedingly grand.

“August 7. The storm of the night before had swelled the brooks but the old trail furnished a good road. Crossing the Castle Valley we passed over the Elk Horn prairie again and bearing north and west crossed a creek and ascended a small valley in which the beaver had been at work, thence through a heavily wooded tract into the valley of another creek flowing eastward. Passing down this for a few miles further progress was barred by a canyon and turning sharply to the left over a slight ridge we camped on the bank of another creek. Two grizzly bears were killed near this camp and the first grasshoppers seen in any numbers were swarming on both creek valleys.

“August 8. The course was north and east, crossing several creeks leading eastwardly. The morning opened with thick fog, which cleared about 10 a. m. One deep valley gave considerable trouble to the wagons, crossing

which we traveled over a high, rocky ridge with schist projecting from the surface nearly vertically, and made a fine camp in the next valley.

“ August 9. The course lay down the valley, which was in the possession of the beaver for several miles, then turned to the left over a ridge. The hills were high and wooded and from an occasional open spot glimpses of the open prairie a few miles away were caught. The creeks flowed eastward, and in piercing through the outward range explored, but none affording a practicable route for wagons were discovered. Springs were abundant of clear, cold water with a temperature of 46 deg. The heavy pine forests on the hillside were full of deer. In all the open glades the grass was luxuriant.

“ August 10. The route was southerly, crossing a low ridge and taking the head of a creek, flowing a little east of south. It is remarkable and characteristic of the Hills that in whatever direction we have wished to go, a creek or valley has always furnished the road. Following down the valley we found it enlarging to a broad, fertile meadow luxuriantly grassed, through which wound the creek, a fine rapid stream ten to twelve feet wide, flowing over a rocky bed. We were continually looking for trout in these streams, which seemed as made especially for that fish, which requires an unfailing flow of cold pure water. There would be no finer trout streams in the world than these were they once stocked. As it was we found nothing but some small chub and a species of sucker perhaps a pound weight. The neighboring hills were six to seven hundred feet in height, capped with fifty feet of bare limestone, resting upon Potsdam sandstone. The meadow terminating and the stream entering a canyon, camp was pitched.

“ August 11. Taking advantage of the command remaining in camp while General Custer made explorations for a road eastwardly, I returned to the camp of the day before with a surveying party for the purpose of measuring a base-line and locating with the transit the important ele-

vations. A base of 3,200 feet was carefully laid out, whence two hills were located, from the summit of which Bear Butte, Harney, Terry and Custer Peaks, and many minor hills could be seen and their azimuths determined. Returning to camp, I found that several elk had been killed during the day by the hunters.

“August 12. Camp was moved down the creek a few miles into a very pretty and luxuriant valley at a point where another large creek joined it from the westward. Judging from its size and direction this must be the Castle Valley Creek, upon which we twice encamped (July 26, 27 and 28), and the Hill’s portion of what is called Box Elder on Warren’s map.

“August 13. Lieutenant Godfrey, with an escort, was dispatched down the creek to determine its course and ascertain his position from bearings on Bear Butte and Harney, when clear of the Hills. The main trail turned north across the creek and following a narrow ravine for a few miles, then turning east and south through open timber and a second growth of pine, emerged upon an open, rolling park of great extent, where camp was made. The open prairie was visible, separated from us by a wooded ridge, which, though not high, was deeply cut by ravines. Elm trees were seen in the vicinity of camp and a plantation of hops was reported.

“August 14. A favorable road was found through the intervening ridge by making several abrupt turns among ravines filled with oak and hills covered with pine, and early in the day we suddenly emerged from the Hills into the encircling red-clay valley, which at this point is closely bordered by the open prairie. The scorching sun and hot dry air of the prairie, covered with yellow grass, bore instant witness to the change in our surroundings, recalling vividly the coldness of air and freshness of vegetation, the abundance of pure, cold water, the noble camp-fires, and quantities of game which had made our stay in the Hills daily delight, and compelling us to contrast with them the dry, dusty journey, the warm, alkaline water,

and scanty wood which awaited us on the return march of over three hundred and eighty miles. The course lay up the red clay valley to the north and west. The numerous creeks in the Hills reaching the prairie sunk beneath the gravel and shale of their beds and disappeared; some of them re-appeared briefly in the form of springs in the red clay valley, which was from two to three miles in width. On account of these springs and the prairie on the east, the command bore straight for Bear Butte. Camp was made on a creek named for the Butte and six or seven miles south of it.

“ August 15. The command remained in camp, reloading and refitting for the return journey. During the day a party made the ascent of the Butte, which is an igneous-looking elevation, rising out of the rolling prairie 750 feet in height and 1200 feet above the camp. Standing clear of the Hills as it does, it is a well known landmark and its summit affords a wide prospect notwithstanding its inferior height. The principal peaks were visible from it as well as the buttes arising from the prairie northeast and southeast.

“ August 16. The course lay northward to the right of Bear Butte, over a rolling prairie and across some small creeks. We found the Belle Fourche, when crossed, to be a rapid stream in a shaly and gravelly bed, eighty feet wide and a foot deep, the banks low and cottonwood abundant. Four Cheyenne Indians were met en route to the agencies from the hostile camp on Tongue river and reported that Sitting Bull, five thousand strong, was preparing to intercept us at the Short Pine Hills. Camp was made near the headwaters of Crow creek, with good water and grass, but no wood.

“ August 17. The course was still northerly to the left of Slave Butte, the name of which is derived from the fact that the Sioux killed some Snake captives there many years ago. The Butte is capped with sandstone and the top is about level with that of Bear Butte, although the height above the base is only about 250 feet, the ground having

risen steadily from the Belle Fourche. The country offered no inducements to linger. There was little grass, weeds and sage-brush prevailing. The soil was dry and porous and cracked into hexagons and octagons of perhaps a square foot in area. Small plates of gypsum were scattered over the surface. Passing a branch of Moreau or Owl river, with miry alkaline banks and water, camp was pitched on the main stream, in whose bed water stood in pools, willow and cottonwood in the bottom.

“ August 18. The course bore for our old camp of July 14 and 15, between the Short Pine Hills in Prospect Valley, which was passed and camp made five miles further on, having seen nothing of our promised interceptors.

“ August 19. A long march of thirty-five and one-half miles was made at first along the divided parallel with the Little Missouri, seven or eight miles distant. The prairie was rolling and hilly, with fair grazing, but water very scarce. Interrupted by the Blois Pommes Blanches Hills and adjacent Bad Lands, we bore to the northeast and camped against the northern end of the Cave Hills, on one of the headwaters of Grand river, with plenty of fair water and good grass.

“ August 20. Traveled north and west across several heads of Grand river and over a rolling prairie, which the Indians, to embarrass our march, had thoroughly burned. Finding no camp on the prairie, which was black as far to the northward as the eye could reach, a rapid descent was made into the valley of the Little Missouri, where among the Bad Lands wood, water and grass were found.

“ August 21. The command remained in camp. We had averaged nearly thirty-one miles per day for five days, having marched one hundred and fifty-three miles from the camp on Bear Butte Creek. The Bad Lands of the Little Missouri apparently began at this point. We could not see much of them to the southward, but down the river they were heavily massed on both banks. The stream was some 50 to 75 feet wide and a few inches deep, bed sandy and gravelly, valley from one-half to a mile in width, with occa-

sional bluff peaks, exhibiting the bare rounded clay surfaces and broad horizontal bands, colored from black to white through the browns, reds and grays, which characterize what are known as the Bad Lands or "Mauvaise Terres." The water was alkaline and the timber cottonwood.

"August 22. Breaking away from the Little Missouri we traveled north over a prairie level at first and then rolling, but all thoroughly burned. In this vicinity I was informed that Captain Fisk in 1865, with a train of one hundred and fifty wagons and a company of infantry, bound for Montana, was attacked by the Sioux and driven back with the loss of seventeen men and several wagons. Camp was made near a spring in a spot of unburned grass, which we were fortunate enough to find.

"August 23. The course was north and east over a high rolling prairie until the Yellowstone expedition trails were encountered; following which eastwardly we camped among the Bad Lands on a small branch of the Little Missouri near the Big Bend of that stream, where the grass had escaped the fire. These Bad Lands are extensive, do not compare in height with those of the Yellowstone and the Missouri, which are sometimes 600 to 800 feet high, these being but from 50 to 150 feet high. They make, however, a very striking landscape and usually are impassable to wagons. The clay hills, of a purity which renders them incapable of supporting vegetation, are absolutely naked and stand thickly crowded together with rounded summits and steep sides, variegated by broad horizontal bands of color. The black and brown stripes are due to veins of impure lignites, from the burning of which are derived the shades of red, while the raw clay varies from a dazzling white to a dark gray. We found the ravines near camp full of ash and box-elder and affording shelter to quantities of black-tailed deer. The remaining homeward journey was at first northeasterly across the river, whose valley was one-fourth of a mile wide and 100 feet deep, stream thirty feet wide and a few inches in depth; thence over a rolling prairie, which would have been well grassed had the Indians

not burned it. The camp of August 26 was near Young Men's Butte, at the head of some ravines filled with oak, whence spring the headwaters of Knife river, flowing north and east into the Missouri. Thence to Fort Lincoln traversed a fine rolling prairie, well watered and ordinarily well grassed. Gradually working out of the burned district on the 27th, the final crossing of Heart river was made at noon of the 30th. The stream was similar to where we crossed it above, being somewhat broader, flowing through a wider and deeper valley, heavily timbered with cottonwood. Fort Lincoln was reached at 4:30 p. m. of August 30th, the sixtieth day of the trip. The wagon train had traveled eight hundred and eighty-three miles and adding the various reconnoissances, the total number of miles surveyed was twelve hundred and five.

“ Whatever may ultimately be determined as to the existence of large amounts of precious metals in the Black Hills, the evidence gathered on the trip, I conclude, was on the whole discouraging to that supposition ; the real wealth and value of the country are beyond doubt very great. Utterly dissimilar in character to the remaining portion of the territory in which it lies, its fertility and freshness, its variety of resources and delightful climate, the protection it affords both against the torrid heat and arctic storms of the neighboring prairie, will eventually make it the home of a thronging population. To this, however, the final solution of the Indian question is an indispensable preliminary. The region is cherished by the owners, both as hunting ground and asylum. The more far-sighted, anticipating the time when hunting the buffalo, which is now the main subsistence of the wild tribes, will no longer suffice to that end, have looked forward to settling in and about the Black Hills as their future permanent home and there await the gradual extinction which is their fate. For these reasons no occupation by the whites will be tolerated, nor so long as the majority of the Indians live beyond the control of the United States Government, can any treaty be made with them looking to the relinquishment of their rights of

ownership which will command observance by the hostile tribes.

“Even if, under the authority of reservation Indians, occupation of the Black Hills should become possible, settlements there could only be protected by force and the presence of a considerable military power. Hostile incursions would not be unfrequent nor an occasional massacre unlikely, and these are conditions unfavorable to a rapid and permanent increase of population. The Indians have no country further west to which they can migrate and only the Saskatschewan country north of the United States boundary and which is still the range of the buffalo, offers them a possible home. It is probable that the best use to be made of the Black Hills for the next fifty years would be as the permanent reservation of the Sioux, where they could be taught occupations of a pastoral character, which of all semi-civilized means of subsistence would be most easy and natural for them and result in relieving the United States Government of the burden of their support.

“Very respectfully, your obedient servant,

WILLIAM LUDLOW,

Captain of Engineers and

Chief of Engineer Department.

The Assistant Adjutant-General,
Department of Dakota.”

CHAPTER VI.

GOLD IN THE BLACK HILLS.

On the 3d of August, General Custer made a report to the Adjutant-General, Department of Dakota, St. Paul, Minn., in which he says:—

“It will be understood, that within the limits of the Black Hills we were almost constantly marching, never

halting at any one point for a longer period than one day, except once and that was near Harney's Peak, where we remained five days, most of the command, however, being employed in operations during the halt. Enough, however, was determined to establish the fact, that gold is distributed throughout the extensive area within the Black Hills. Gold was obtained in numerous localities in what are termed gulches. No discoveries, so far as I am aware, were made of gold deposits in quartz, although there is every reason to believe, that a more extended and thorough search would have discovered it. No large nuggets were found; the examination, however, showed that a very even, if not a very rich, distribution of gold is to be found throughout the entire valleys. In other words the "prospecting" showed that while the miner may not in one panful of earth find nuggets of large size or deposits of astonishing richness, to be followed by days and weeks of unrewarded labor, he may reasonably expect in certain localities to realize from every panful of earth a handsome return for his labor. While I am satisfied that gold in satisfactory quantities can be obtained in the Black Hills, yet the hasty examination we were forced to make, did not enable us to determine in any satisfactory degree the richness or extent of the gold deposits in that region. Seeking for gold was not one of the objects of this expedition, consequently we were illy prepared to institute or successfully prosecute a search after it even after we became aware of its existence in the country."

On the 15th of the same month General Custer made another report still more replete than the previous one, of which it was confirmatory. It read as follows:—

“¹ HEADQUARTERS, BLACK HILL ENCAMPMENT, }
BEAR BUTTE, D. T., August 15, 1874. }

“*To Assistant-General, Department of Dakota, St. Paul, Minn.:*

“My last dispatch was written on the 2d and 3d inst.

and sent from the south fork of the Cheyenne, from a point on the latter nearest to Fort Laramie.

“On the morning of the 4th inst. I began my return march to our main camp, near Harney’s Peak, arriving there by a different route on the 6th.

“On the morning of the 7th, the expedition began its march northward, Bear Butte being our next objective point. We advanced without serious obstacle until within ten or twelve miles of Bear Butte, when we found our further progress barred by a range of impassable hills. We attempted to effect a passage through some one of the many valleys whose water-courses ran directly through the Hills in the desired direction, but in every instance we were led into deep, broken canyons, impassable even to horsemen. Through one of these I made my way on foot, and from a high point near its mouth obtained a view of the plains outside. Retracing my steps I placed the command in camp in a fine valley in which it had halted, and devoted the remainder of the day to a further search for a practical route through the Hills.

“The result decided me to follow down a water-course which led me first toward the south and afterward toward the east. This stream proved to be Elk creek, the valley of which, as well as the stream itself, proving at least equal in beauty and extent to any passed through during our march. We camped twice on the stream, and as far as we proceeded down its course we had a most excellent road; but finding that, like nearly all other streams leaving the Hills, its course would take us into a canyon which would be barely made practicable for our wagons, I searched for and discovered a narrow gap in the rocky wall which forms the southern boundary of the valley, and which was conveniently large to allow our wagons to pass through.

“A march of an hour up a gradual ascent and through a pine forest, brought us to a beautiful park containing thousands of acres and from which we obtained a fine view in the distance of our old acquaintance, the plains. Here we pitched our tents for the last time in the Black Hills;

nearly every one being loth to leave a region which had been found so delightful in almost every respect. Behind us the grass and foliage were clothed in green of the freshness of May.

“In front of us as we cast our eyes over the plains below, we saw nothing but a comparatively parched and dried surface, the sunburnt pasturage of which offered a most uninviting prospect both to horse and rider, when remembering the rich abundance we were leaving behind us. A march of twenty-six miles gradually bearing northward, brought us to the base of Bear Butte, at which point I concluded to remain one day before beginning our return march.

“I propose to return by a different, although perhaps not shorter route adopted in coming to the Hills. I am induced to make this change in order to embrace a large extent of unexplored country within the limits of our exploration, and particularly to enable us to locate as much as possible of that portion of the Little Missouri of which nothing is known. I expect the expedition to reach Fort Lincoln on the 31st of August. The health of the command has been and is most excellent. The expedition entered the Hills from the west side, penetrated through the eastern and most southern ranges, explored the major portions of the interior, and passed out the most eastern ranges which form the boundary of the Black Hills. From the fact that in all our principal marches through the Black Hills we have taken without serious obstacles a heavily laden train of over one hundred wagons, it may be inferred that the Black Hills do not constitute the impenetrable region heretofore represented.

“In entering the Black Hills from any direction, the most serious if not the only obstacles were encountered at once near the outer base. This probably accounts for the mystery which has so long existed regarding the character of the interior. Exploring parties have contented themselves with marching around the exterior base and from the forbidding aspect of the hills as viewed from a distance,

inferred that an advance toward the interior would only encounter increased obstacles.

“In regard to the character of country inclosed by the Black Hills, I can only repeat what I have stated in previous dispatches. No portion of the United States can boast of a richer or better pasturage, purer water, the natural temperature of which in midsummer as it flows from the earth, is but twelve degrees above freezing point, and is of greater advantage generally to the farmer or stock-raiser than are to be found in the Black Hills. Building stone of the best quality is to be found in inexhaustible quantities. Wood for fuel and lumber sufficient for all times to come. Rains are frequent, with no evidence in the country of draught or freshets. The season perhaps is too short and the nights too cool for corn, but I believe all other grain could be produced here in wonderful abundance. Wheat would yield particularly large.

“There is no doubt of the existence of various minerals throughout the Hills, as the subject has received particular attention of experts who accompany the expedition and will be reported upon in detail. I will only mention the fact that iron and plumbago have been found and beds of gypsum of apparently inexhaustible extent.

“I referred in former dispatches to the discovery of gold. Subsequent examinations at numerous points confirm and strengthen the fact of the existence of gold in the Black Hills. On some of the water-courses almost every panful of earth produced gold in small yet paying quantities. Our brief halts and rapid marching prevented anything but a very hasty examination of the country in this respect, but in one place and the only one within my knowledge where so great a depth was reached, a hole was dug eight feet deep. The miners report that they found gold among the roots of the grass, and from that point to the lowest point reached, gold was found in paying quantities. It has not required an expert to find gold in the Black Hills, as men without former experience in mining have discovered it at an expense of but little time or labor.

“As an evidence of the rich pasturage to be found in this region, I can state the fact that my beef-herd, after marching upward of six hundred miles, is in better condition than when I started, being now as fat as is consistent with marching condition. The same may be said of the mules of the wagon train. The horses of the command are in good working condition.

“I have never seen as many deers as in the Black Hills; elk and bear have been killed. We had no collision with hostile Indians.

(Signed) “G. A. CUSTER,
“Brevet Major-General U. S. A. Commanding Expedition.”

These reports of General Custer, correct in themselves, were magnified and exaggerated by others until the sensitive imagination of western prospectors and frontiersmen constructed for itself a region of riches and wealth awaiting only the reaping of the harvest.

CHAPTER VII.

GORDON'S STOCKADE — PIONEER EXPLORERS FOR GOLD.

The expedition of General Custer was accompanied by H. N. Ross and William T. McKay, in the capacity of guides and miners. Before General Custer left the Hills he had expected to be ordered to make an expedition to the Yellowstone and Big-Horn country; where he subsequently lost his life; and Mr. Ross had agreed to accompany him. After waiting for some time and the orders not arriving he suggested to the General that the idea of an expedition had probably been abandoned, and he desired to be freed from the obligation to accompany him, telling the General at the same time that he was going to the Black Hills to look for gold. The General admitted that the proposed expedition was probably off, and jocosely remarked that if Ross

attempted to return to the Black Hills he would be obliged to capture him and bring him back. Ross with a sly twinkle in his eye replied: "General, I'll take good care you don't capture me." "Now, Ross," said Custer, "if I were going to the Black Hills I would not fit out an expedition and start from the nearest military post, but I would go off ten or fifteen miles, cross the Missouri river, and instead of taking a well-known trail, strike out directly for the Bad Lands." Ross profited by this advice. A party was organized with pack animals and going up the Missouri river, they paddled over in canoes, swimming their animals, and once on the west side struck directly for the Bad Lands, where, notwithstanding the terrible reputation of that country, they found plenty of grass and water. Marching on they touched at different points along the foot-hills, but seeing Indians everywhere, they returned to the east of the Missouri.

In October, 1874, several of the prospectors who had accompanied General Custer in his expedition organized an exploring and mining party to start from Sioux City, Iowa.

Early on the morning of October 5th, 1874, the party, consisting of David G. Talent, his wife, Annie L., and son, Robert, Moses Aaron, Major Brochman, Chas. Cordero, Charles Blackwell, Thomas McLaren, Eph. Witcher, John Gordon, J. J. Williams, Dan McDonald, Henry Thomas and twelve others broke camp. They were as brave and adventurous spirits as ever walked the earth. Ahead of them was a trackless waste, hundreds of miles in extent, with their route through the country of hostile Sioux. The wagons were loaded with provisions and mining tools, a supply of everything that would be useful and indispensable having been provided. To avoid the soldiers, who had been ordered to follow up, arrest the men and burn the wagons of all parties that went on the Indian reservation, the train struck off in a southern direction for Elkhorn river, telling those they met who were inquisitive enough to ask, that their objective point was the O'Neill

settlement in Nebraska, where they were going to take up land and establish another colony.

They followed up the Elkhorn until they had nearly worn it out, and then crossed over, after leaving the O'Neill settlement, to the Niobrara, and crossed that stream twenty miles above the mouth of the Keya Paha, and from thence up a stream that is the dividing line between Nebraska and Dakota. At this point they saw unmistakable signs of a large party of hostile Indians in the neighborhood, and to avoid them they bore off to the northeast; and when they came to White river, fearing they might be followed by soldiers, they drove up the channel of the stream for miles, and then, having agreed upon a Butte in the distance as a point at which they would all unite, they left the stream, a wagon at a time, and all met at the point designated. These precautions were well taken, as it was afterwards learned that, twenty-four hours after they had struck White river, Capt. Mason, with a troop of cavalry, who had trailed them from their starting point, came to where they had taken to the water, and, not being good water trailers, they gave up the pursuit and returned. In good time they arrived at the south fork of the Cheyenne river and went into camp.

Soon afterwards they saw a large party of Indians, and, thinking their time had come, made rapid preparations for a vigorous defense. When the Indians got within shooting distance they halted, and five of them, with a flag of truce, came into their camp. They proved to be a party of Yantonaïse, under the command of White Elk. The Indians were very friendly, as that family of the Sioux nation always has been to the whites. White Elk told them if they were hunting for gold the best place would be further north than where they told him they were making for — where Custer City now stands. There was more gold north of there, but he said that the country up in that direction was swarming with hostile Sioux, and the party would have to keep a sharp lookout in whatever direction they traveled.

They kept on, however, and when about twenty-five miles south of Bear Butte they struck Custer's exit trail. Their cattle were so worn out by forced driving day and night, to avoid Indians and soldiers, that it became necessary to lighten up the wagons by packing everything they could get on their ponies. After doing this they followed up the trail, and reached Custer's Park on the 24th of December, 1874.

Two hours after pitching camp in Custer's Park, Charley Cordero and little Bob Talent found one of the prospect holes made by McKay and Ross, of the Custer party, and obtained from it a good prospect. This was the first gold found by the party, and they all thought their fortunes were made; and the company were in consequence highly elated and full and overflowing with days work, and exuberant spirits. Christmas day was celebrated with every pomp that their limited resources would admit of. There was no turkey with cranberry sauce, but the excellent bean was served up in every known style.

December 26th they broke camp, packed up the wagons and moved down stream two miles, where they went into permanent winter-quarters.

Naturally their first idea was safety, and ignorant of the characteristics of the Indians surrounding the Hills, they proceeded to build themselves a fortress about a mile and a half south of where the City of Custer now stands. The structure erected was a stockade work, eighty feet square, with flanking projections at the corners, ten feet high and six cabins ranged around the inside. The walls were of upright logs set two feet in the ground and raising ten feet above. These pallisades were about ten inches in diameter, very straight and set as close together as possible. The walls as well as the flanking projection were loop-holed for riflemen and the interstices between the upright logs were covered by battons on the inside. There was but one entrance and that on a side difficult of approach on account of the creek, and it was barred by a heavy bullet-proof double gate and defended by loop-holes on each side. Between the com-

fortable log cabins set on the inside three sides of the court and the stockade wall, was sufficient space for their wagons, animals, tools, etc. Prospecting was carried on notwithstanding the inclemency of the weather, and the whole valley was riddled with prospect holes and satisfactory discoveries were made.

In February, 1875, two men, Charles Blackwell and Thomas McNaren, from this camp visited Cheyenne and spread exciting reports of their rich paying mines. Later Messrs. Gordon and Witcher visited Sioux City and Chicago and made similar reports. In the meantime the remainder of the party were suffering for want of provisions. On the 14th of March, 1875, J. J. Williams, Dan McDonald and Henry Thomas, with another man whose name is forgotten, packed up several ponies and struck out on foot for Fort Laramie for aid. Their object was to let the outside world know that they had discovered gold here, in order that there might be an immigration, as they well knew there would be an immigration of Indians with the early grass and without help the number of their mess would be "Dennis."

On April 6, 1875, the holders of the fort were made glad by seeing in the distance the four doves they had sent out of their ark, returning, and with them four other men. The reception given was a warm one, no hypocrisy about it; and from their friends they heard the first news from the States they had had since they left Sioux City in October of the previous year. This pleasure was soon turned to grief when they found that the strangers were soldiers in disguise, a part of Captain Mix's command that was encamped a few miles distant. They were ordered to pack up and leave immediately, as *Lame Antelope* with 3,000 braves was in camp six miles from where Mix and his command were corralled. *Lame Antelope* had a bad reputation, that a mention of his name was enough to take a man's appetite, without saying that he had 3,000 others with him, that had started out on purpose to interview the stockade party.

It seems that when J. J. Williams and his companions reached Fort Laramie they were arrested by the soldiers, and had been brought along to guide the command to the stockade. The little party hastily gathered up a few of



DINNER IS READY.

their cattle and a few ponies, and, leaving their wagons and a large amount of provisions behind them, lit out for Capt. Mix's camp. The captain explained the situation to them; his imperative orders to arrest and take out of the country every white person found here; the close proximity of

Lame Antelope and his hostiles, and his utter inability to take their wagons and cattle, and the great danger they would be in if they remained alone in the Hills. He did everything for them he could, and was gentlemanly in all of his transactions with them.

An April 7th, 1875, Capt. Mix's train, consisting of his wagons, eighty-four soldiers and the prisoners, pulled out for Cheyenne, where they arrived on April 26th. On their way down they passed through Spotted Tail and Red Cloud Agencies. At Red Cloud the Indians were fearfully excited, and demanded the arms and supplies of the prisoners as their part of the plunder for trespassing upon their reservation. Capt. Mix succeeded in standing them off, however, and they passed through in safety.

They remained at Cheyenne until the 19th of July, when a portion of them slipped quietly away at night and headed for the stockade. The soldiers overtook them, arrested them and carried them back. They started again, and were again arrested and carried back. This was repeated the third time; but before getting back to Cheyenne they escaped, and finally reached the Hills in October, 1875.

The presence of white people in the Hills contrary to the spirit of existing treaties with the Indians compelled the United States Government to take cognizance of the matter and early in March, 1875, a company of cavalry under Captain Mix was dispatched from Fort Laramie as seen above. The Government also took measures to prevent others from entering the Hills.

The reports that had been brought in by the stockade party in their true and in their more exaggerated forms with the addition of others more or less fictitious, were now spread far and wide over the West, and great excitement prevailed in the frontier settlements bordering on the reservation and extended even into the thickly settled regions of the East. The great floating population of the frontier, miners and others, suffering from a dearth for several years of the excitement peculiar to mining discoveries, were now ready to rush into this new El Dorado

of the West, and different towns on the immediate frontier rivaled each other in the statements of their superiority as outfitting posts for the Black Hills, while the mere fact that there was a desire on the part of the Government to sustain its part of the treaty and keep intruders out of the reservation only added new zest to their enterprise.

It soon became evident that there was a large body of miners ready to enter the new field, many of whom expressed no wish to transgress the word of the Government given in the treaty, and there was a very general desire, that the right to prospect and mine should be acquired for them by the Government, either by purchasing the Black Hills or by obtaining a concession from the Indians as was endeavored in a subsequent council.

As many of the reports circulated were undoubtedly exaggerated, and many persons well informed as to this region of the northwest and of high authority, were strong in their denials of the presence of gold there, at least in remunerative quantities, it became of general importance to obtain accurate and reliable information on the subject. It was determined, therefore, that trusty persons should be sent immediately to examine the region and report to the Secretary of the Interior, so that the true facts regarding the nature and value of the mineral deposits should be authoritatively known and might furnish a basis for any subsequent negotiations with the Indians for the territory.

As this expedition, both in the territory to be examined and in the purpose of examination, was one relating specially to the interests of the Sioux Indians, the organization and control were given to the Bureau of Indian Affairs, under which the work was begun and completed. Under authority of the Secretary of the Interior, Mr. Walter P. Jenney was therefore appointed by the Commissioner of Indian Affairs, March 26, 1875, to undertake the work of the examination, and Mr. Henry Newton was commissioned to act as his assistant.

At first it was proposed that with his assistant and with the help of a small force of miners and laborers Mr. Jenney

should immediately proceed to the field, make in a few weeks a hasty examination, return and make his report. But as much of the value of the labor would be lost without a reliable map of the region — that of Lieut. Warren and Gen. Reynolds expressing only the outer rim of the Hills — it was finally arranged to add to the party a topographer and an astronomer. Dr. V. T. McGillicuddy, late of the Lake and Northern Boundary Surveys, now of Rapid City, So. Dak., and Captain H. P. Tuttle, late of the Cambridge Observatory, were therefore commissioned to accompany the expedition, respectively as topographer and astronomer.

The personnel of the expedition as finally organized consisted of Walter P. Jenney, E. M., geologist in charge, Henry Newton, E. M., assistant geologist, V. T. McGillicuddy, M. D., topographer, Captain Horace P. Tuttle, astronomer, C. G. Newberry, M. D., assistant astronomer and naturalist, W. F. Patrick, E. M., and the following corps of miners and laborers: John Brown, Jr., William H. Root, head mining assistant, William O. Baldwin, A. T. Bottsford, A. P. Sanders, T. H. Mallory, Thomas Morey, James Conklin, Robert M. Jones, A. E. Guerin and George Bowlin, cook.

With all possible haste the plans were matured and the necessary instruments and tools purchased and on April the 25th (1875) the whole party assembled at Cheyenne, Wyo. Here an unexpected delay was unfortunately forced upon them, as the order for the necessary means of transportation, wagons, horses, etc., had not been issued by the War Department as had been supposed. The time, however, was spent in fitting out the numerous little details of the expedition and finally on the 18th of May, all transportation, etc., having been fully provided for, Cheyenne was left behind.

Professor Jenney gives the following account of the expedition:—

“ Arriving at Ft. Laramie on May 20th, all arrangements

were consummated, and crossing the Platte on the afternoon of the 24th of May, we joined the military escort furnished by the War Department, consisting of Lieut-Col. R. T. Dodge, Twenty-third Infantry, commanding; Lieut. M. F. Trout, Ninth Infantry, adjutant; Lieut. J. F. Trout, Twenty-third Infantry, quartermaster; Lieut. J. G. Bourke, Third Cavalry, topographer; and Surgeons Jaquette and Kane with two companies of the Ninth Infantry under Captains A. H. Bowan and Munson, and Lieut. DeLany; two companies of the Second Cavalry under Captain Spaulding and Lieutenants C. T. Hall, J. H. Coale and F. W. Kingbury; four companies of the Third Cavalry under Captains W. Hawley, G. Russell and H. W. Wessels and Lieutenants A. D. King, R. G. Whitman, James Lawson, J. G. H. Foster and C. Morton, with a train of seventy-five wagons.

“ This large command, numbering fully four hundred men, would seem at first unnecessarily strong for the mere purpose of protecting from Indians those who were pursuing the investigation in the Hills, but the attitude of the Indians on the penetration of this, the most cherished spot of their reservation, could not be foretold and it was known that they had been not a little agitated by the incursion of General Custer in the previous year, and by the subsequent visits and operations of miners.

“ Though no bands of Indians were met during the work, our safety and freedom from their visits were probably due to the well-known magnitude and strength of the expedition. A great measure of the success of the exploration is due to the hearty co-operation of the officers of the command, but particularly to the commander, Colonel Dodge, whose unwavering interest and determination to make the work successful and whose constant assistance and courtesy were especially valuable and grateful during the entire course of the work. To Lieutenants Morton and Foster, who were detailed for topographical work, Dr. McGillicuddy is indebted for assistance in the prosecution of his mapping.

“ Reaching the Black Hills on the east fork of the

Beaver on the 3d of June, the work of the survey was soon begun and a permanent camp was established on French Creek, near the stockade erected by the miners during the previous winter. In order to pursue the work more rapidly and thoroughly, a division of the party was made as follows: Mr. Jenney with a corps of assistants assumed more particularly the investigations of the mineral resources of the country, prospecting the gold deposits, etc., while the remainder of the party, Mr. Newton, Dr. McGillicuddy and Captain Tuttle, continued the topographical and more complete geological study of the hills.

“As the work of the survey progressed northward, the main body of the escort of troops was transferred from one base of supplies to another, so as to keep up with the course of the explorations. In this manner with scarcely a day's remission from work, the survey continued until the entire area of the Black Hills between the forks of the Cheyenne had been mapped and its geology and mineral resources determined as fully as the rapid progress would permit.

“Having passed over the entire country and accomplished the object of the expedition, the various parties assembled on the Cheyenne at the mouth of Rapid creek, and began the march homeward, reaching Ft. Laramie, *via* White river, and the agencies of Spotted Tail and Red Cloud, on the 14th of October, after an absence of four months and twenty days.

“Having disbanded the expedition at Cheyenne, the officers of the survey returned East and assembled in Washington early in November to complete their report. While in the field the various discoveries of the presence of gold in the different districts were announced to the Commissioner of Indian Affairs at Washington and a preliminary report by Mr. Jenney on the mineral resources of the hills, accompanied by a small preliminary map by Dr. McGillicuddy, was published in the annual report of the Commissioner of Indian Affairs for 1875. The completed observations of the mineral resources, climate, etc., possessing immediate and

particular interest, were by resolution of the Senate called for in advance of the final report, and, with a preliminary map, were published in the spring of 1876."

OTHER PIONEERS.

Early in the spring of 1875 a party, among which were Wade Porter, William Coslett, Thomas Mannahan, Robert Kenyon, Richard Wickham, H. F. Hough, James O'Neil, Alfred Gay (after whom Gayville was named), John Berdeau and another French half-breed, the last two acting as guides, started from Spotted Tail Agency and went directly to French creek, reaching the Witcher and Gordon stockade the latter part of April. They prospected the abandoned shafts of the stockade party and found very good diggings.

In the beginning of May, Raymond, a United States scout, leading a squad of cavalry soldiers from Spotted Tail Agency, arrived at the camp, bearing instructions to remove the miners from the Hills. Seven of them were captured, together with all the provisions; but the other seven men who were prospecting for quartz escaped. The captured ones were taken to the agency and discharged. Those remaining in the Hills, including Porter, prospected and hunted on French creek, Spring and Castle creek, until about July 1st, when Colonel Dodge's command, with which were Professors Jenney and Newton, arrived on French creek via the stockade. Their scouts assured the miners that they would not be molested, and a considerable trade was carried on between the parties and the miners, exchanging gold dust for provisions, tobacco, etc. After the arrival of Colonel Dodge's command the miners prospected considerably in company with Professor Jenney, continuing until August the 10th. The Professor gives an account of his meeting with the miners in his report to the Government, and he says:—

“ When I reached French creek, June 16th, 1875, about fifteen men were found camped four miles above the stockade, where they had been at work for several weeks, and

the yield of gold thus far has been quite small and the richness of the gravel-bars are greatly exaggerated. The prospect at present is not such as to warrant extensive operation in mining.

“ WALTER P. JENNY, E. M.,
“ Geologist Exploration of the Black Hills.”

General Crook, who had received instructions from the Government, called the miners together and informed them on the 10th of August, that he had orders to take them all out, but if they would go voluntarily by the 15th they could do so. Most of them complied, but a considerable number were so far away that they did not hear of the order for some days. All of the company to which Porter belonged went out, except himself, he was mining on Castle creek north of Custer. When he heard of the arrangement he came in and left with a party for Fort Laramie on the 19th, accompanied by a United States escort and wagon train.

Porter remained at Laramie for ten days, during which one Mallory reported three ounce diggings on Iron Creek, in the northern Hills. A party consisting of thirty-one men, led by Mallory, and having a pack train of 130 animals, was soon organized and started for the new diggings. Porter accompanied it. They arrived on the ground in October and found good prospects, but water for sluicing purposes was scarce. A portion of the party remained on Iron and Beaver creeks, but Porter and six others, not being satisfied, concluded to go back to the washings on Castle creek. Several weeks later two of the party, who had been hunting on Slate creek, were found by a squad of cavalymen who tried to get them to tell where their camp was ; but the men refused for several days, until finding there was nothing to be gained by holding out, they finally gave them the information and the cavalry succeeded in capturing the whole outfit and taking them prisoners to Custer City, then occupied by Major Pollock with several companies of troops.

The Major confined the prisoners in a "bull pen" under guard for several days, when they were sent to Cheyenne for trial before the United States Commissioner. This was a second offense and Major Pollock threatened to have them punished severely; but the Commissioner, after holding them for several days, concluded that he had no authority to punish them and they were set at liberty and all their property taken by the military restored to them. The party returned to Laramie, where four of them, including Porter, purchased horses and supplies and again started out for the Hills. To avoid the troops they took a circuitous route west of the Hills and went to Sand and Bear creeks, in the northwest, where they prospected for several weeks, when Porter and Oscar Clyne determined to visit Castle creek once more. On Spearfish creek they struck a miner's trail, and following it up they reached Deadwood Gulch, at Gayville, about the middle of December. Here they found a party of twelve miners, among whom were William Gay, William Lardner, Hilan Hulan, Frank Bryant and his party, and others who had been there for several weeks.

CHAPTER VIII.

GEOLOGICAL STRUCTURE OF THE BLACK HILLS.

The following most interesting remarks on the geological structure of the Black Hills were kindly furnished the author by Mr. Henry Newton, the accomplished assistant geologist of Col. Dodge's expedition, who devoted to the subject a whole summer of close study and labor so patient and so indefatigable, that it would be hardly too much to say that there is scarcely a rock in the whole length and breadth of the "Hills," which does not bear the mark of his hammer:

"The rocks forming the Black Hills consist of three

classes, the older metamorphic sediments — now slates and schists, the more recent unchanged sedimentary strata, the sandstones, limestones, clays, etc., resting upon the former uncomformably and the rocks of igneous origin, the granites, feldspar, porphyries, etc. These stratas are exposed in the following order descending:—

Feet.	White clay with limestone	} Tertiary, exposed between Foot Hills and S. Cheyenne.
250	.....	Fine quartz conglomerate.
	.....	Drab and Black Clays and Clay Shales.
1500		Fossils.	} Cretaceous.
		Hayden 2, 3, 4, 5.	
200	.....	Dakota Sandstone.
200	Sandstone Hayden's 1.	} Triassic.
200	.....	Clays, marls and sandstones.
250	.....	Red clay with gypsum.
50	Pink limestone.	} Red Beds.
100	.....	Red clay.
200	.....	Impure reddish sandstone.
400	Pink sandstone alternating with limestone	} Carboniferous.
	.....	Limestone — massive.
	.....	Pink, shaly and calcereous sandstone.
200	Sandstone and conglomerate.	} Potsdam.
	.....	Clay, slates and mica-schists with masses of injected granite

“I. The oldest rocks geologically are the schists and slates, which form the nucleal area of the Hills, a widely elliptical region about twenty miles wide and forty miles long north and south. These are mainly of sedimentary origin, but have been metamorphosed by cosmical forces into micaceous, garnetiferous and argillaceous and siliceous slates and schists. Of these the micaceous and garnetiferous schists of the Harney's Peak region appear to be of greater age than the argillaceous and siliceous slates further north, as one or two localities seem to show their uncomformability. These rocks contain very numerous seams of quartz, ferruginous quartz and quartzite, which have been found in some cases to carry free gold, and it is probable that all the gold found in the gravels and sands of the streams running through these rocks, was originally derived from this source. At various places in the area of the metamorphic schists and slates are masses of feldspathic granite as Harney's Peak and vicinity, and beyond the

same the feldspathic porphyry as Terry's Peak, Inyan Kara, Crow Peak, Bear Butte, Sun Dance Hills, Bear Lodge, Little Missouri Buttes, etc., which have been injected through the superincumbent strata at the time of the elevation of the range. The approximate time of this injection, I have previously thought to be between the close of the cretaceous and opening of the tertiary age, though further proof is wanted to establish this fact. Further mention of these igneous centers will be made when speaking of the order of events in the building up of the Black Hills. In rudely concentric order around the area of slates uncomformably upon them lie the later sedimentary rocks, beginning with —

“ II. The POTSDAM FORMATION. Uncomformably upon these metamorphic slates, etc., and surrounding the nucleal area lies a mass of reddish or reddish-brown sandstone, often at the base conglomerate, in some places formed of large boulders from the area of slates, which from the fossil remains is referable to the Potsdam formation of the lower silurian age. This formation is variable in thickness — from ten to two hundred and fifty feet — being thicker at the north in the vicinity of Terry's and Warren's Peaks and thinnest at the southern end of the Hills. Sometimes the sandstones are found changed into a hard quartzite, where the igneous rocks at the time of their injection have penetrated into and abutted against them. Fossil remains, algae, mollusks, etc., have been found in this formation of the Hills excelling in their abundance and beauty of preservation those from the most noted localities in the East.

“ III. The CARBONIFEROUS FORMATION has a very great development in the Black Hills, forms a very important feature in their geology and gives character to much of their topography. The mass of the formation is a limestone of white or pinkish color of different degrees of purity, siliceous especially near the top and changing above into an alternation of pinkish sandstones and limestones, a transition to the sandstone of the Red Beds.

“ The thickness of the formation is greatest on the

northern half of the Hills, where it becomes four to five hundred feet thick. Though the same geological horizon in the Mississippi Valley bears many valuable seams of coal, it is over most of the area of the great West, as in the Black Hills, a limestone containing no coal, the product of a deposition in a deep sea. Surrounding the Hills in a thick stratum, covering often large areas and inclining rarely at an angle exceeding ten or fifteen degrees, the outgoing streams draining the interior area, have cut through it and the overlying red beds in long, deep and rugged canyons, which are a most interesting and wild feature in the topography of the Hills and which prevent on almost all sides easy entrance into and passage through them. From the base of the mesa, which forms the western border of the nucleal area of slates for a long distance, and which is mainly formed of the carboniferous limestone, rise in springs most of the streams draining the Hills in a west and east direction. From the observations of Dr. V. T. McGillcuddy, topographer, the 'Monument,' and elevated point of carboniferous limestone on the mesa near Floral Valley, is the highest point in the Black Hills, being seven thousand six hundred feet above the sea, or one hundred and fifty feet above Harney's Peak. Fossils are not abundant in the limestones of this formation, but a sufficient number of characteristic species were obtained to fix accurately its geological position.

" IV. Next in ascending order are the RED BEDS, which are so interesting a feature in the geology of the whole Rocky Mountain range, from the Rio Grande on the south to the far north. Though fossil remains have been found in but very few localities in the whole area of their exposure in the West, and none whatever by our expedition, from their general lithological character and their relation to the underlying carboniferous and overlying jurassic this formation has been generally known by American geologists as the triassic. The unusual absence of fossil remains is probably explained by the fact, that the sediments compos-

ing the formation are the result of a deposition in shallow and very brackish waters in which animal life was scarce or entirely absent. In these notes I have included in this group — the Red Beds — the following members : beginning below — a heavy mass, two hundred feet or more of impure sandstones of a variegated pink or red color, which are separated by some seventy-five feet of red clay from a purple limestone about forty-five feet in thickness, above which lies a heavy mass two hundred to two hundred and fifty feet in thickness of red clay containing immense beds of gypsum. Some geologists maintain, that the purple limestone and overlying red clays and gypsum should be included with the jurassic, but as yet we have no palæontological evidence for this division, and hence I have included them all under the name of Red Beds.

“ This pink or purple limestone is a peculiar interesting member of the geological series, as it forms the outer slope of so large a portion of the timbered area of the Hills. This is finely illustrated by the broad rising slopes from Inyan Kara eastward toward Camp Transfer and from the Red Water valley southward into the northern end of the Hills. The red clays with gypsum, which overlie this limestone, are probably the most interesting elements in the entire geological series represented in the Hills. From their persistency and high color with their numerous strata of snowy-white gypsum encircling the Hills on all sides in a broad belt, they form a picturesque feature from whatever side the Hills are approached. The wonderful red valley, that compasses the Hills, as a moat or ditch surrounds a fortress, is wholly cut in these beds, which being soft and easily eroded, have been cut and washed away by the rains and the draining streams. This valley, widening out at the north and northwest, forms the valley of the Red Water and the great area between the Sun Dance Hills and the Inyan Kara. Another area has also been discovered occupying the valley of the Belle Fourche for a long distance above and below the Devil's Tower.

“ V. THE JURASSIC. The beds of clay, marl and sand-

stone, forming the base and in some places the greater part of the escarpment-like hills that overlook the Red Valley and surround the fortress of the Black Hills, were from their fossil remains recognized by Professors Meck and Hayden in 1858 as of jurassic age. These beds, though varying somewhat in character, are found to be continuously exposed in the foot-hills. In the northwest they thicken out very remarkably and occupy a large area between Sun Dance Hills, Warren's Peak and the Devil's Tower.

“VI. The CRETACEOUS. The cretaceous formation is formed at its base of a series of yellowish and reddish sandstones, the Dakota group, more or less massive, capping the cordon or escarpment of foot-hills that surround the Black Hills proper. Above this is a great thickness of black and drab clays and clay shales, which slope off gradually on all sides and underlie a large area of the plains of Dakota and Wyoming. This cretaceous area surrounds the hills in a broad belt and by the valley of the Cheyenne is connected with the cretaceous deposits of the Upper Missouri. Beyond this wide rim of cretaceous, the plains are underlaid by beds of tertiary age. Certain of these beds contain considerable quantities of crystallized gypsums of silenite, which may be seen for miles glistening in the sunlight, and large amounts of soluble salts, alkalies, which contaminate most of the streams running through them. At certain localities at the exposures of these beds on the Cheyenne and its branches quite a large number of beautifully colored and preserved shells, common forms of the cretaceous, were obtained.

“VII. The TERTIARY. Of the tertiary formation there exists but a very limited area immediately embraced in the region of our survey of the last summer, and this occupies a narrow strip between the South Cheyenne and the foot-hills from Rapid, south to French Creek. Where examined it did not attain a thickness above two hundred or three hundred feet, composed at base of a stratum eight to ten feet of fine waterworn quartz gravel, on which rests a series

of light-colored clays with some impure limestone. Everywhere large quantities of white chalcedony are found covering the surface, which formerly filled crevices and seams in the mass of the formation. This area appears to have been a fresh water deposit, once probably connected with the territory (Bad Lands) east of the Cheyenne river. On account of the very slight dip of both the cretaceous and tertiary toward the east in this region, no unconformability of dip could be discovered between them though it was earnestly looked for. Beyond the area of cretaceous, already mentioned encircling the Hills, the plains are underlaid for great distances by the tertiary, westward toward the Big Horn and Powder river region, southward to and beyond the Pacific, and eastward occupying most of the distance to the Missouri river. This formation, which along the White and Niobrara river is remarkable for the fossil vertebrate remains, was found to be wholly barren when examined west of the Cheyenne. An area of vertebrate fossils in the Bad Lands however was passed through between the Cheyenne and the White rivers, which excels in richness any area of the Bone Fields heretofore known.

“VIII. DRIFT. Over large areas especially on the north and east side of the Hills, these being most thoroughly examined, the surface to, and even beyond the Cheyenne, is scattered with small fragments and pebbles of the harder rocks of the Black Hills, sometimes several feet in thickness and in some instances, near the Cheyenne river, masses many hundred pounds in weight of quartzite, etc., are found lying on the surface. Even as far eastward as between the Cheyenne and White rivers, pieces of the granite rock, rose-quartz, etc., peculiar to the Black Hills, were found sparingly scattered on the surface.

“Though we could find in the Hills proper no indubitable evidence of glacial action, still the presence of these fragments mentioned, would seem to require some transporting force greater than that of water and this I consider to have been ice. We have no reason to doubt, that the glacial period enshrouded all this region with ice, that

it should have left so few marks of its presence, is at present somewhat of a problem, though perhaps an immense ice-sheet with little motion and dissolving away in the sea produced by depression of the land, would explain some of these facts.

“Of the operation of more recent geological forces in denuding, cutting out valleys, channels and canyons of which there are such fine exhibitions in the Black Hills, perhaps there need be nothing said, as they are simple and plain phenomena producing the present topographical features.

“In order to give a more general idea of the structure of the Black Hills than can be conveyed by a mere description, a rude cross-section of the Hills from east to west near Harney's Peak is given below.

SEQUENCE OF EVENTS OF FORMATION.

“In conclusion I would add only a brief synopsis of what at present appears to me to have been the sequence of events in the formation and elevation of the Black Hills.

“*First.* The elevation of the schists and the metamorphic slates produced by one or oft repeated forces of elevation, forming finally an island near where Harney's Peak now stands and a low ridge or reef, south and north lifted a little or more above the sea level.

“*Second.* The action of the shore waves forming in great part the sandstone of the Potsdam, which in the southern end of the Hills is in many places composed at base of a thick bed of waterworn boulders or cobblestones, that could only have been formed by the action of the waves on a shore line. Northward we have found nowhere this shore deposit, but like the mass of the Potsdam elsewhere it is a uniform coarse sandstone. There is no doubt, however, that large parts of this formation were derived from sources more remote than the Black Hills area itself.

“ *Third.* A depression of the land surface so as to form a sea in which the limestones of carboniferous, four hundred to five hundred feet in thickness, were formed mainly by organic agencies and in the latter part of this era an oscillation permitting the formation of the alternate shore and deep-sea deposits, sandstones and limestone of the series above the mass of the carboniferous limestone.

“ *Fourth.* An elevation of the land, followed by a gradual deepening of the waters, so as to permit the shallow water deposits, the impure sandstones at the base of the Red Beds, a continued depression of the land permitting the deposit of the mid Red Bed limestone in deep water and finally a long period of shallow water estuaries or lagoons along the entire base of the Rocky Mountains, permitting the red clay sediments and the formation of the gypsum. This gypsum is the product of evaporation of saline water, the gypsum or sulphate of lime being deposited before the sea salt. These lagoons were periodically flooded by fresh sea water, thus maintaining the supply of the deposited salts. These same circumstances, excepting the deposition of gypsum, continued for a still further period, permitting the formation of the jurassic series and then succeeded.

“ *Fifth.* A period of elevation succeeded by a gradual depression, during which the sandstones of the base of the cretaceous were formed as a shore or shallow water deposit.

“ *Sixth.* A continued depression of the land, a long period of shallow water and the deposition of the clays of the upper cretaceous, while further south and southeast in deeper water were deposited at the same time the heavy limestone deposit of the cretaceous, filled with marine fossils.

“ *Seventh.* Elevation of the mountains as now constituted. This period in the sequence of events is of somewhat doubtful age, but from the position occupied by the cretaceous and other facts, I am constrained to place it as pre-tertiary. The direction of the force producing the elevation and the manner of its action are questions I

hardly dare at present to discuss, as they are subjects which even our ablest geologists consider still debatable ground. The force was probably, however, propagated as a wave in an east and west direction, producing at the same time the main chain of the Rocky Mountains, to which the Black Hills also properly belong. This force at various localities broke through the superincumbent strata and in places was followed by an ejection of igneous matter. The maximum point of this outburst was undoubtedly near Harney's Peak, whereby the granites of that period were outpoured. This granite is remarkably similar to the ejected granite of the entire Rocky Mountain range. The greatest action of igneous forces in the Rocky Mountains is stated by some observers to be from about the southern line of Dakota to Central Colorado, which strip contains the peaks of greatest elevation in the entire range, this elevatory force dying out toward the south and north. So in the Black Hills we find the centers of igneous action in the north to be marked by less evidences of high heat and great force, as in many instances the strata around are a little tilted and changed. To this class belong Terry's, Custer's, Inyan Kara, Baer, Warren's, Devil's Tower and other peaks. That the elevation was not previous (as stated by Professor Winchell) to the deposition of the Red Beds is evidenced by the accompanying sketch through Crow Peak. At this peak the strata are physically unchanged excepting the Potsdam sandstone, which is for a considerable thickness converted into a hard compact quartzite. All the peaks above mentioned are composed of a feldspar porphyry very uniform in character. Upon the Red Beds as shown in the section of Crow Peak the jurassic and cretaceous beds are found to lie conformably dipping with them, thus proving the post-cretaceous age of the uplift and ejection of the igneous rocks.

“*Eighth.* A large areal depression, followed by a gradual elevation, permitting the shallow freshwater deposits of the tertiary clays, etc., of whose extension,

however, across the Hills in a continuous sheet, we have no evidence whatever.

“*Ninth.* A final elevation of the lands, over which probably there was spread a sheet of ice, the glacial period, the few evidences for which I have already mentioned.

“*Tenth.* That there has been no great change in the level of the Hills above the sea, since the last great uplift, or rather that they have not been submitted to any great depression, is evidenced very strongly by the fact, that there is nothing to show the former existence of a deeper system of drainage than the present one. The immense denudation, however, since the close of the tertiary, is evidence of the vast duration of time that must have since elapsed.

“The present result of the ages of force, whose action is described by Mr. Newton, is a huge pustule on the earth with an inclosed core of granite surrounded by a higher rim of secondary. This rim is well defined throughout its whole circumference, and the ground falls or slopes away from it in both directions. On the inside the rain and frost of ages have torn away projections, the higher portions falling down to fill up and smooth away the inequalities of the lower, until at the present time it is probable that some considerable portion of the original granite area has been covered and hidden by washings from the overtopping secondary.

“Although the whole of this part of the Hills is by this process much softened and rounded from its original asperities, the inside of the rim is still very abrupt in descent for some hundreds of feet. From the foot of the mesa on the inside the ground slopes toward the center very gradually until broken by granite ridges. On the outside of the rim the general surface preserves its original level with a slight slope from the rim forming a great mesa or tableland surrounding the whole central core, from five to thirty-five miles broad, and sinking suddenly to another level. On the southeast this mesa is so broad as to cross the

South Cheyenne, which stream cuts its way through it in a deep and difficult canyon.

“ Taking their rise in the rim, the waters have cut in this mesa long slopes, tortuous channels, and magnificent canyons. Surrounding this mesa on every side and one of the most marked and peculiar features of the Black Hills, is a depression which from the color of the soil was called the Red Valley. This valley, well defined, but more or less broken by hills or ridges, is from one to fifteen miles in width. On the outside of this valley, and a seeming outer rampart to the ‘ sacred fastness ’ of the Black Hills, is a range of hills from four to eight hundred feet above the valley. This range is generally narrow, but one or two miles in width. On the northeast, however, it widens out into an independent mass of mountains, attaining a maximum elevation of six thousand nine hundred feet, covering an area of at least five hundred square miles, and making the Black Hills consist of two distinct masses of mountains, separated by the Red Valley, here from five to fifteen miles wide. This mountain mass has also a central granitic area small and illy-defined, however, as compared to the eastern section of the Hills. From the foot of the outer rampart of the Hills the ground slopes away with more or less abruptness to the general level of the plains.

“ Nowhere have I traversed a country of equal area whose surface is so greatly diversified. There is no form in which nature spreads, piles or cuts her materials which is not repeated again and again in endless variety within the narrow limits bounded by the two principal branches of the Cheyenne. The granitic area is especially uneven. Granite ridges radiate from Harney’s Peak as from a center. These are cut by other ridges oblique or perpendicular, and except ‘ creek bottoms ’ and a narrow belt along the base of the western carboniferous rim (which has been somewhat smoothed over as heretofore described), there is no level land in the granitic region.

“ The mesas bounding the granite on the north and south though cut by numerous profound chasms are yet by far

the most level part of the Hills. The upper portion is rounded by the action of the elements into long gentle slopes. At a distance of from twenty to thirty miles from the interior rim these mesas sink suddenly into the Red Valley, giving rise to some magnificently broken and picturesque effects. In the vicinity of Terry's Peak the northern mesa is so torn by the action of the water, as to render the country almost unfit for the use of man. Just here the great northern and eastern secondary rims surrounding the granites come together. In every direction diverge canyons profound in depth, abrupt in declivity. To get through this country with wagons is a matter of fortunate accident as well as of knowledge. Even on horseback one becomes so entangled in thickets and canyons, as to be forced to dismount and sometimes to turn back.

“The north face or wall of the north mesa is exceptionally high, steep and broken. Through the immense mass of secondary several huge granite cones have thrust their sharp heads, producing more or less disruption of strata, which the elements have not failed to take the utmost advantage of. Some of the grandest contrasts and most splendid effects of mountains and gorge are to be found along this face. The Red Valley, the great dry moat, which surrounds the huge fortification of the Black Hills, is extremely irregular in surface. Sometimes it is really a smooth, beautiful valley, in other places it is a jumble of low broken red hills cut by innumerable ravines and looking like a Virginian ‘old field’ on a large scale. The northwestern section of the Black Hills is even more broken than the principal division.”



GEN. CUSTER.

CHAPTER IX.

GENERAL CUSTER'S DEATH.

As the result of Custer's expedition was the finding of gold in the Black Hills, the Sioux foresaw that in a short time they would lose their choicest hunting grounds, an event which, when consummated, they traced directly to General Custer. Hence they hated him, and only waited an opportunity to carry out their revenge, which was soon gratified.

Late in the fall of 1875, the agents at the different agencies along the upper Missouri were instructed to call in all the Indians then away hunting, and to inform them that their right to hunt in Wyoming and Montana had expired. The Sioux failed to comply with these orders, and in March, 1876, General Crook took the field against them.

General Custer set out from Fort Abraham Lincoln with the Seventh Cavalry, on the 15th of May, to participate in the campaign. A Sioux village on Powder river was destroyed by the army. This had the effect to turn the more timorous Indians toward the agencies, and the more warlike, under the leadership of Sitting Bull, Gaul, Rain-in-the-Face, Crazy Horse, and other sub-chiefs toward the north.

Until this time these Indians had been living in a semi-state of war and peace, but now the lines were drawn and the gauntlet accepted. The warpipe was sent to the various camps, and as early as May, 1876, a village of nearly 7000 Sioux, Cheyennes and renegades from neighboring tribes had assembled on the Yellowstone river.

All was life and gaiety. The Indians felt safe in the security which their numbers seemed to afford. Game was very plentiful; their horses were in prime condition for the chase or war. Games of chance and athletics were freely indulged in. Racing, training, and friendly contests with

rifle, bow and arrow were of daily occurrence. The children of nature were enjoying such sports as nature had taught them.

The runners were now returning from the northwest, as far as the British possessions, and bringing arms, ammunition, and recruits to their cause. Everything promised security from want, hunger or the invasion of the pale-faces.

The medicine-men in the meantime were not idle. Stories of the braveries of the fathers were related to the sons. They were exhorted to be as brave and strong of heart, and the land they now occupied would be secure to them for numbers of years. The gods had been invoked; the medicine was good. They said that unless they called down the wrath of the Evil Spirit by acts of cowardice, no enemy could withstand them; that the Great Spirit was watching over his children with pity, and that now he had placed it in their power, not only to avenge their own wrongs, but also those of their fathers.

The many wrongs the white men had done them were detailed by the old witches and story-tellers of the tribes; and when it is considered that this was the bravest and most warlike of the Sioux nation, the result of the engagement with Custer, their most hated foe, is no longer an object of wonder.

About the 1st of June, 1876, the spies who had been sent out to watch the movements of the enemy returned with the news that General Crook with a large command had appeared on the Tongue river. As soon as this was learned it was resolved to send out a party to make a sortie to discover their strength and engage them in battle if practicable. This was continued from day to day, in the hope of drawing the enemy into some ground where an ambush could be laid. This they came near accomplishing on the 11th, and if they had been decoyed into the canyon of the Rosebud the fate that awaited Custer would have fallen on Crook.

After this unsuccessful move it was decided by the Sioux

to go closer to the mountains, to the end that the wounded could receive better care and have cold water to bathe in, etc., and that their religious rites and annual Sun Dance could be performed; and thus we find them near the Little Big Horn river, where the ill-fated Custer overtook them.

The chiefs and head warriors were now in daily councils and consultations; the wily Sitting Bull and his able assistant, Rain-in-the-face, counseling prudence and strategy; the impetuous Crazy Horse, the Custer of the



INDIAN CHIEFS AND BRAVES IN GALA DRESS.

Sioux, advising a charge and riding down of the enemy by sheer force of numbers, a part which he fulfilled to the letter later on.

The column under General Terry was advancing steadily along the Yellowstone river. The Sioux were kept informed of his movements by spies and couriers, and his presence gave no uneasiness. They were accustomed to the white man's mode of warfare, and little thought that Long Hair (the Sioux name for Custer) would leave the infantry to toil on as they might, while he with his cavalry and a few Indian allies, moving by forced and heavy

marches, would meet and dare them on ground of their own choosing.

The spot selected by the Sioux was calculated for defense. Flanked by deep ravines and deep and almost impenetrable underbrush in the rear, it was a wild place in nature chosen by the Indians for their preservation. The first notice of the approach of troops was given by a few squaws who had been out some distance from the camp for the purpose of gathering wild turnips (a favorite food with these people). They reported that they had seen a heavy cloud of dust moving toward them, and parallel with the river, and as buffaloes always travel at right angles in valleys so as to cross the stream square, they argued that it must be horsemen. This news was scoffed at by the Ogallalas. It could not be that any foe would be rash enough to move on them in their stronghold; besides, no one but squaws had seen anything to cause alarm, and so they gave the story no credence. However, Chief Gaul, always suspicious, determined to send out a few scouts to make an investigation. They returned before midnight with the confirmation of the report that soldiers were coming and gave a good estimate of their numbers, and also reported that they were under the leadership of Long-Hair (Custer).

All was now excitement and turmoil in the Indian camp. Orders were issued by Sitting Bull that no lodges were to be struck, but that the squaws should take the old, the sick and wounded, together with their children, and retreat into the high hills with the stock at first sign of breaking day. It was decided to make no demonstration until the soldiers should attack the camp. The command on the right was given to Rain-in-the-Face. The Cheyennes were ordered to take the center, and all arrangements to meet the foe were quietly made before daylight.

Meantime the portion of the Indians known as the Ogallala Sioux slept quietly on. Nor is this to be wondered at, when we know that the camp was upwards of three miles in length, and perhaps this was well for the Indians,

for had the Ogallala chief, Crazy Horse, been at the council when the final decision was taken, Custer might have been met on the open plain, where in conjunction with Reno, the result would have been very disastrous to the Indians; but it seemed, as the Indians had said, "their medicine was good," for all worked to their favor.

At last morning broke. Not the slightest breeze caused a ripple in the leaves of the giant cottonwoods that lined the camp in the rear. Spies were now sent out to watch and report the advance of the soldiers, runners were sent to warn the Ogallalas, and all was put in readiness to await the onset. In a short time the spies came dashing into the camp with the news of the near approach of the troops, who soon appeared in the river bottom, in full view. Here Custer divided his command into two columns, sending Major Reno's battalion over the ford near the upper end of the village, while he moved down the river with five companies until he arrived nearly opposite the center of the village, and at a greater distance from Major Reno than he had intended, being about two miles from him in an air line and three and a half miles from him by the trail.

The enemy quickly repulsed Major Reno, who retreated with severe loss to a high bluff on the opposite side of the river, where he was joined by Captain Benteen, who had been dispatched that morning with three companies on a reconnoissance before the enemy was discovered. An effort was then made to join Lieutenant-Colonel Custer; but the enemy appeared in such force that the movement was abandoned and the command intrenched on the bluff, where it was subjected to a furious assault, losing sixty-four men killed and wounded.

Meanwhile the enemy, having Major Reno's command in a state of siege, turned upon Custer with an overwhelming force, and in a struggle which continued about forty-five minutes, annihilated his entire command, only one Indian scout (Curly) escaping to tell the story of the disaster.

What Custer's thoughts and feelings were during this struggle against overwhelming odds, and in the presence of

death may be surmised but never known. His method of attack had miscarried. Seven companies of his command were cut off, and he was unable to communicate with them. But he undoubtedly fought against time hoping for the night to come, which might give him a chance for the detached companies to join him, or enable him to prepare for a successful defense until the column under General Terry and Colonel Gibbons due twenty-four hours later should arrive.

With these hopes he doubtless cheered his men in the unequal contest, yielding ground by inches, until he was brought to bay on a knoll, near the river, where with about thirty of his officers and men he fought heroically to the end against the merciless savages who surrounded him.

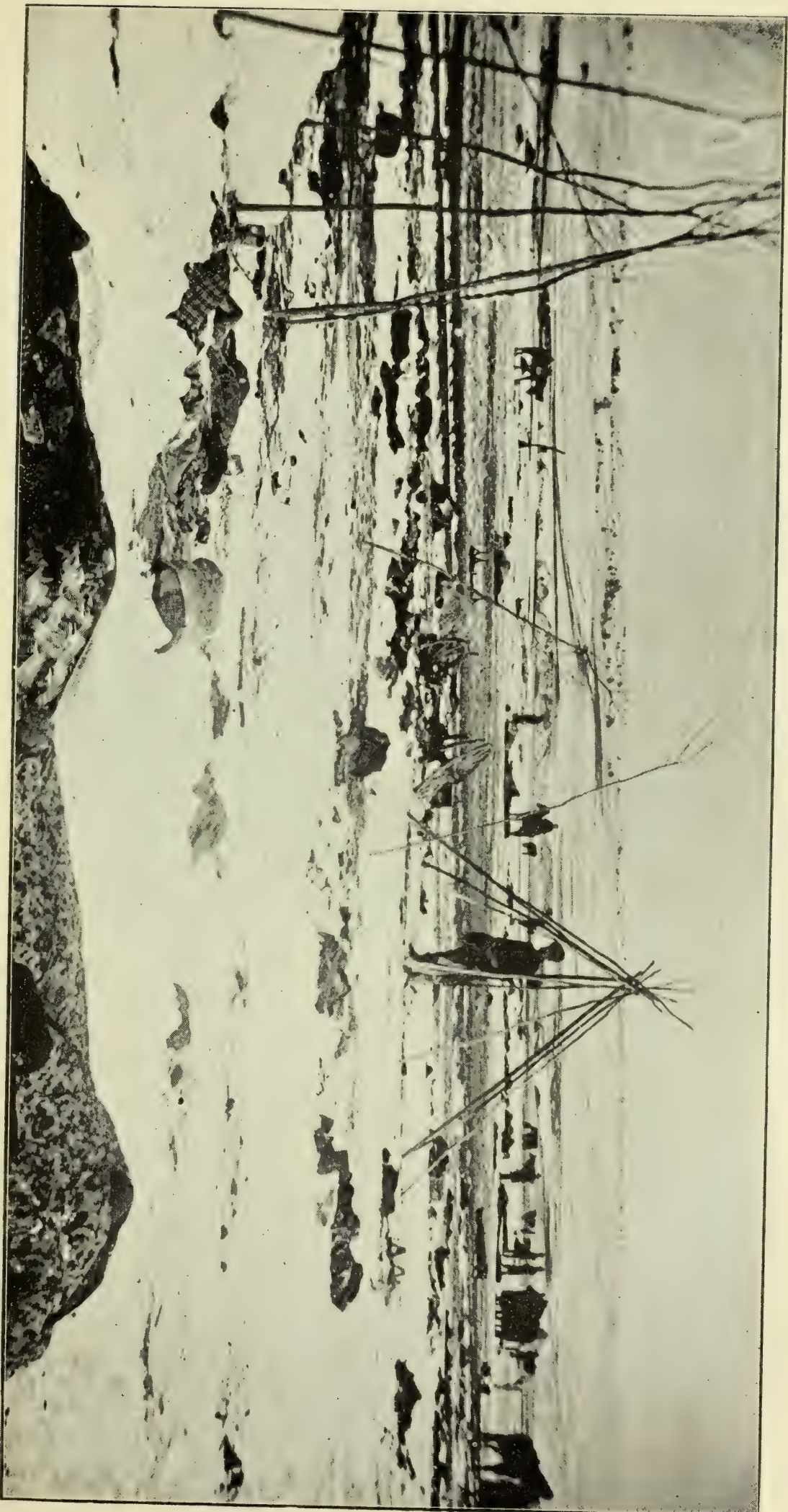
Thus died on June 25, 1876, the hero of many a gallant cavalry charge, fighting hand to hand with the veteran warriors of the Sioux tribes, at the head of all that remained of his devoted squadrons. For some reason not one of the soldiers was scalped by the Indians. They left thirty-six of their braves dead on the battlefield.

Captain Smith of General Terry's staff telegraphed from Bismark to General E. D. Townsend, Adjutant-General:—

“General Custer, Captain Custer, Keogh, Yates and Cook, Lieutenants Smith, McIntosh, Calhoun, Hodson, Rielly, Porter, Sturgis and Crittenden are killed; Lieutenant Harrington and assistant surgeon Lord are missing; 261 dead have been found and 52 wounded have been brought away.”

(Signed) A. C. DUNN, A. A.-G.

After a season of rest on the battlefield where he fell, the remains of Custer were removed to West Point, N. Y., where they were interred with imposing ceremonies, and in August, 1879, this last battlefield was laid aside by orders from the headquarters of the army, as a national cemetery.



BIRD'S-EYE VIEW OF WOUNDED KNEE BATTLE FIELD, LOOKING NORTH.

CHAPTER X.

TREATY IN 1875 FOR THE CESSION OF THE BLACK HILLS.

The experience of the Government in the matter of keeping trespassers from the Black Hills was not encouraging, and it soon became evident that some arrangement would have to be made whereby the country could be opened for mining operation.

This had been believed from the time of General Custer's return, in the fall of 1874; and on the 18th of June, 1875, the Secretary of the Interior appointed a commission to treat with the Indians for a cession of the Hills, or a permit to occupy that region for mining purpose. The commission consisted of the following gentlemen: Hon. William B. Allison, of Iowa, Chairman; Bishop E. R. Ames, Maryland; Judge F. W. Palmer, Illinois; Brigadier-General A. H. Terry, U. S. A.; Hon. A. Comings, Missouri; Rev. S. D. Hinman, Santee Agency; G. P. Beauvais, Esq., St. Louis; W. H. Ashly, Esq., Beatrice, Neb.; A. G. Laurence, Esq., Rhode Island.

Bishop Ames and Hon. F. W. Palmer declined to serve, and Hon. T. O. Howe of Wisconsin, was substituted; but he was obliged to leave a few days subsequently on account of a press of other duties. John S. Collins, Esq., was appointed secretary.

The grand council assembled on the 20th of September, at a point on the White river of Dakota, about eight miles from the Red Cloud Agency, north of Crow Butte. The members of the commission present were Allison, General Terry, Comings, Hinman, Beauvais, Ashly and Laurence. Of the Indian nations, mostly Sioux, representatives were present from the following tribes: Brules, Ogalallas, Minneconjous, Uncpapas, Blackfeet, Two-Kettle's Band, Sans Arcs, Lower Brules, Yanktons, Santees and Northern Cheyennes and Arapahoes. The first proposition was to pur-

chase the mining right, the right to revert to the Indians when the minerals were exhausted, or the country abandoned for mining purpose.



CARLO AND SPITZ,
The Author's Traveling Companions in the Black Hills.

The Indians, according to their usual custom, asked time to consider the proposition. Under the influence of the "squaw men" and half breeds they were induced to set so

exorbitant a value upon the country that negotiation became useless. At first they demanded \$30,000,000 to \$50,000,000, and later a still more exorbitant price.

Among the noted chiefs present were: Red Cloud, Red Dog, Little Bear, Spotted Tail, Spotted Bear (Sioux); Black Cloud (Arapahoe); Little Wolf (Cheyenne); Fast Bear, Dead Eyes, Crow Feather, and Flying Bird. They finally demanded \$70,000,000, and in addition support for seven generations of Indians, with plenty of cattle, horses, agricultural implements, guns, ammunition, etc. One chief said he had seen a white man's house nicely furnished with black walnut furniture, and he demanded the same kind.

The council finally broke up without accomplishing anything. The commission in its report recommended Congress to take up the matter and try again to open the Hills, as the demands of the miners and settlers were becoming imperative, and it was certain that the Indians would either be obliged to make some satisfactory arrangement, or to see the whole region, within a very short period, in the hands of a hardy and determined class of settlers, who would defend what they deemed their right, not only against the red man, but, if necessary, against the Government itself.

In 1876, a second commission was appointed by Secretary Chandler to negotiate once more with the savages, who began to realize that they must prepare to cede their lands, or see them taken possession of without further reference to the original owners. The new commission consisted of the following gentlemen: George Manypenny, Ohio; Henry B. Whipple, Minn.; Jared W. Daniels, Albert G. Boone, Colorado; C. Ball, Iowa; Newton Edmonds, Dakota; S. D. Hinman, and Augustine S. Gaylord. Under date of August the 24th, the Department of the Interior sent the following instruction to these commissioners:—

“ 1st. The Indians to relinquish all right and claim to any

country outside the boundaries of the permanent reservation as established by the treaty of 1868.

“2d. To relinquish all right and claim to so much of that said reservation as lies west of the 103d meridian of longitude.

“3d. To grant right of way over the permanent reservation to that part thereof which lies west of the 103d meridian of longitude, for wagon and other roads, from convenient and accessible points on the Missouri river, not exceeding three in number.

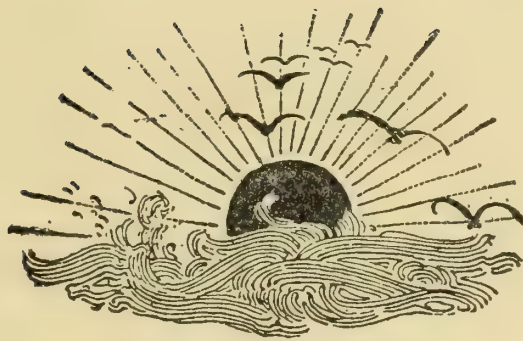
“4th. To receive all such supplies as are provided for by said act and said treaty of 1868, at such points and places on their said reservations and in the vicinity of the Missouri river, as the President may designate.

“5th. To enter into such agreement or arrangement with the President of the United States as shall be calculated and designed to enable said Indians to become self-supporting.”

The commission was successful and the treaty was signed at Red Cloud Agency, on September 26th, 1876, by Sioux, Cheyennes and Arapahoes. The signers were: Red Cloud, Young-Man-afraid-of-his-Horse; Red-Dog; Little-Wound; American Horse; Afraid-of-the-Bear; Three Bears; Fire-Hunter; Quick-Bear; Red-Leaf; Five-Eyes; White-Cow; Good-Bull; Lone-Horse; Two-Lance; Veasel-Bear; Bad-Wound; High-Bear; He-takes-the-evening-Soldier; Slow-Bull; High-Wolf and Big-Thunder.

The treaty was ratified and approved by the President on February the 28th, 1877. No special sum seems to have been appropriated in payment for the ceded lands, but the Government bound itself to provide all necessary aid to assist said Indians in the work of civilization, and the stipulations of the treaty of 1868 were reiterated. The Government also agreed to furnish the Indians stipulated rations and supplies until they should become self-supporting.

The territory ceded is bounded by the north and south forks of the Cheyenne river and the 103d meridian of longitude west of Greenwich, England. The Indians agreed to permit the building and establishing of wagon roads, not exceeding three in number, from the Missouri river, said routes to be designated by the President of the United States.



BOOK V.

CHAPTER I.

GOLD MINING IN THE BLACK HILLS.

Where does the gold and silver come from? is a question very often asked and difficult of reply, aside from the fact of their creation by the Omnipotent Creator.

It is as difficult to say where the gold comes from as it is to prove where it goes to, as at both ends of its course it is in the smallest possible particles. A question, too, is often asked: Why is it that gold and silver are called precious metals, and are more valued than iron, copper and other metals, far more useful than gold and silver? This reason has been given by an ancient writer: "After mankind had lost faith in the one true God and became idolaters, the sun and moon as the great givers of life were adored as gods. The color of the gold was somewhat similar to the color of the sun's rays, and some called it 'the tears wept by the sun,' and the color of silver resembled the pale light of the moon, and hence they are respectively sacred to the gods of the sun and moon. And as the reverence for the burning orb of the sun, master of all the manifestation of nature, was tenfold greater than the veneration for the smaller, weak and variable goddess of the night, so was the demand for the metal sacred to the sun ten times as great as the metal sacred to the moon."

During the celebrated law suit between the Sitting-Bull and Richmond Mining Companies, which was before the court at Deadwood in 1883 and 1884, Professor Riotte gave the following testimony: "In regard to rock formation I make two, probably three, differences: they are either

igneous, or sedimentary in their origin; but it is possible to speak of a third as metamorphic, the original character of which has been completely changed by subsequent action. Quartzite veins are by far the most common forms of mineral deposits in the United States. Quartzite is formed from sedimentary deposits and metamorphized became subsequently impregnated with minerals from springs down in the earth."

He goes on to say that one theory of the mineralization or metallization of mineral veins is that during the vein age, mineral springs burst forth from the interior of the earth on the line of least resistance, carrying metal in solution as they escaped the heat and pressure in approaching the surface. All rock deposited from the sea water contains some gold or silver. In fact all sea water contains an appreciable amount of gold and silver, hence all schisted rock laid down in the beds of old oceans contains more or less gold and silver.

When rain falls on the earth like distilled water from the clouds, it settles in basins and valleys and sinks down in the ground and through the sedimentary rocks, gradually getting greater pressure on it. Under pressure water will go through every known class of rock and will dissolve every known substance, compound as well as elementary in shape. It thus becomes impregnated, and as one drop follows another, it keeps on its course till it finds a crack or crevice and returns to the surface as a spring. This water becomes a great solvent of minerals, of lime, silica, gold, silver, and other things. If the water fell through a mass of limerock it would be charged heavily with lime, and if it then rises on a fissure it will dissolve quartzite, or quartz, or silica; and when it begins to rise on a fissure or an actual opening, it deposits what it has taken up and kept in solution for two reasons: it gradually loses its pressure as it rises to the surface, and secondly, something else is dissolved by the water. Silica for instance will displace lead, silver and gold.

A crack may be made by an earthquake, and water pass-

ing through it and gradually falling down, will come out as a hot spring, and the fissure actually stands open and waits to be filled by the stuff that is dissolved by the water and deposited on its sides as it loses its pressure. And this material so deposited, gold, silver, lead, copper and iron throws the mountain asunder. This material is obtained from the rocks through which the water percolates after having fallen in the shape of rain. Veins are thus formed by the power of crystallization from year to year and age to age.

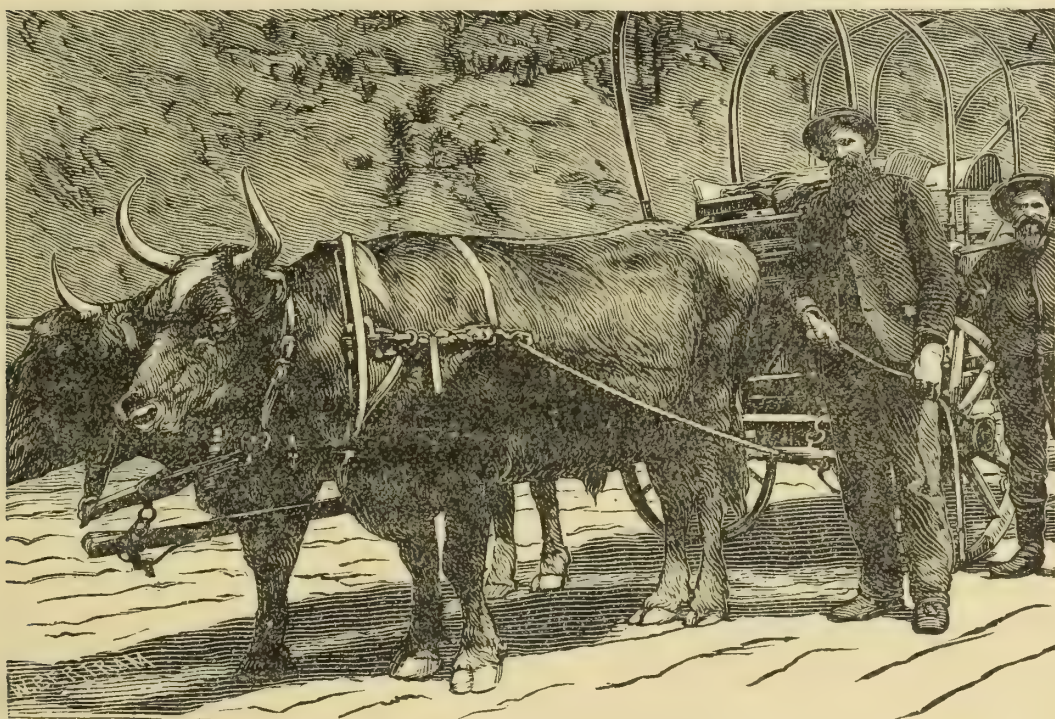
Mr. Fox and Mr. Beignierel refer the origin of many metallic veins to electro-chemical agencies, which are operating at the present day, and transfer the contents of veins even from the solid rock in which they are disseminated, into fissures in the same. The former of these gentlemen has shown conclusively that the materials of metallic veins, arranged as they are in the earth, are capable of exerting a feeble electro-magnetic influence, *i. e.*, they constitute galvanic circuits, whereby numerous decompositions and recompositions, and a transfer of one element to a considerable distance, may be effected.

He was inclined to experiment on this subject by the analogy which he perceived between the arrangements of mineral veins and volcanic combinations, and he thinks if such an agency be admitted in the earth, it shows why metallic veins having a nearly east and west direction are richer in ore than others; since electro-magnetic currents would more readily pass in an east and west direction than in a north and south one, in consequence of the magnetism of the earth. Mr. Neckar and Dr. Buckland suggest that some mineral veins may have been filled by the sublimation of their contents into fissures and cavities of the superincumbent rocks, by means of intensely heated mineral matter beneath.

Mr. Z. L. White wrote in 1881 to the New York *Tribune*: "The mines of the Black Hills yield both gold and silver, though the silver deposits were not discovered till some time after active mining for gold had made the region

widely known. The gold mines may be included in four classes: 1. Placers. 2. Quartz veins between slate walls. 3. Quartz veins between porphyry walls. 4. Cement deposits.

“The placers in the Black Hills are of great extent, and some of them have yielded very large sums. Some of the dry places (that is, beds of clay or gravel, containing a considerable amount of free gold, but at such a distance from water having sufficient head to wash the gold, and



PROSPECTORS GOING TO THE NEW GOLD FIELDS.

consequently requiring that the dirt should be brought to the water, or the water to the placer at considerable cost), have proved so rich that the dirt has been brought from some of them by wagon loads to the water, and where they were more extensive, it has been found profitable to construct ditches or flumes of several miles in length, to bring a mountain stream to supply the pipes for hydraulic mining.

“These placers are many and seem to be distributed all over the Hills, and being rich and mostly undeveloped, it

is likely that placer mining will be conducted with great profit here for many years to come. A placer claim in the Black Hills extends three hundred feet along the gulch, and from rim to rim.

“The second class of gold mines found in the Black Hills, quartz in slate, or between slate walls, is represented by the great belt around Deadwood, on which the mammoth mines of the hills are situated. The country rock, that is, the rock of which the mountains are formed, is micaceous slate, which has been thrown up at an angle of about fifty degrees. Between the walls of this slate is a vein of brown quartz containing free gold in small quantities, and separated from the country rock on each side by a layer of chloritic slate, often containing more gold than the quartz itself. The vein is of enormous width, from 40 to 150 feet, but is frequently divided by ‘horses’ of slate, or large bodies of that substance extending into, or across the vein. The rock in these ‘horses’ is sometimes rich enough to work, but generally is quite barren.

“There are two theories of the formation of these veins; and while there seems to be sufficient ore in all the large mines for present purposes, the future of these properties may depend in great degree upon which of these theories proves to be the correct one. The first is that advanced by Professor Jenney, the young geologist who was sent by the Department of the Interior. He holds that these ledges of gold-bearing rock, are true fissure veins, ‘inter-laminated fissures’ he calls them, that is, fissures opened between the layers of the slate rock, and not across the line of stratification. The auriferous quartz, he says, has been formed by the water solutions which have come up from below. He accounts for the ‘horses’ of slate in the vein by likening the cleaving of the rock to the splitting of a piece of oak wood. When a wedge is driven into it, particles of the wood cling from side to side across the opening made by the wedge. So, he thinks, when the rock was opened, bodies of slate extended across from one wall to the other, and remained in that position when the

aqueous solution from below came up, surrounded them, and deposited the gold-bearing quartz.

“ He explains the fact that the slate walls and ‘ horses ’ contain gold, by saying that the slate, which had minute spaces between its layers, soaked up the mineral-bearing fluid, which in some cases replaced the particles of slate. As a rule, the impregnation of the slate becomes less as the distance from the wall of the vein increases. Believing the veins to be true fissures, Professor Jenney supposes that they extend into the earth for an indefinite distance and probably grow richer in their lower portions. Professor Jenney believes that after these veins were formed the ocean covered what are now the Black Hills, and that by its action it tore down the surface, scattering fragments of veins all over the country. Evidences of marine action are easily to be found in the vicinity of the mines.

“ The other theory held by several geologists of much learning and experience is, that the vein matter was precipitated from an aqueous solution that covered it. Their explanation and argument is this: The foot wall of these veins is slate, a formation which everybody knows is of aqueous origin. The vein of quartz is deposited on this slate parallel with its line of stratification, just as one layer of rock is deposited on the other. Above the vein we also find slate, and above that where it has not been carried away by the actions of the elements, a cement formation also of aqueous origin. These facts point conclusively to a horizontal deposit of the vein matter on a slate bed. The precipitant was probably oxide of iron, and it is, therefore, very natural that these ores containing the largest proportion of oxide of iron should be the richest in gold, as they are.

“ After all these deposits had been made, the hills were gradually thrown up, as in their present state, from under water. If the true fissure theory is correct (and it is the one most generally accepted by the most experienced miners), then there is reason to believe that the ore extends far into the bowels of the earth. And even if the theory

of an aqueous deposit or precipitation is accepted, the fields over which these deposits took place may have been so great that when turned up upon their edges they may be practically inexhaustible. These quartz veins between slate strata seem to be, in many respects, the analogies of the contact lodes of silver in Colorado, and may have had a similar origin.

“The quartz veins between porphyry walls have not been sufficiently developed to make it safe to give an opinion in regard to them. Some of the best mines of this class are situated in Strawberry Gulch, about seven miles east of Deadwood, and in some of them considerable bodies of ore have been found.

“In many of the placer mines, a little below the bed of the stream, but considerable above bed-rock, a layer of hard cement, consisting of sand, gravel, and boulders, and carrying free gold held together in one hard conglomerate mass by oxide of iron, has been found. This substance has been a great obstacle to gulch miners on some claims. They had no means of crushing it to free the gold, and to remove it in order to get at the auriferous gravel beneath was very expensive. On the hill-tops, which have withstood best the actions of the elements, similar cement deposits have also been found, varying from one and a half to twelve and eighteen feet in thickness. Some of them are very rich in gold and others very lean.

“A number of mines have been opened on the cement beds and are now working out their pay-ore. The rock is reduced in the same manner as quartz, by stamping and amalgamating. A cement deposit may be very valuable as long as it lasts, and may bring to its owner large profits, but its value depends entirely upon its extent and character. Like a placer (and it is, in fact, nothing but a solidified placer) it will some day be worked out and become worthless.”

Mr. White places the yield of the Black Hills mines in 1878 at \$3,500,000; in 1879 at about \$4,500,000; and in 1880 about \$6,000,000.

CHAPTER II.

GOLD DIGGINGS.

In traveling through the Black Hills one will notice along the numerous creeks vast piles of gravel. Through the midst of these heaps of pebbles, among which now and then there towers up the round back of a boulder, or rises a little grassy island, bearing some charred stump, one may often see remains of wooden machinery and the ruins of abandoned log cabins; or he may even meet with men at work, and learn how the hasty little stream is made to pause and pay toll in service as it rushes downward from the high cliffs where it was born.

All these appearances are signs of gold mining by the method known as "placer-washing" or "gulch-digging." It is the simplest, and, in some respects, the most interesting of all the processes by which the precious metal is got out of the earth.

When gold has been discovered in any region (and this usually happens through some lucky accident), adventurous men rush to the spot and look for more signs of it. This search is called "prospecting," and it is done by parties of two or three, who go along the creeks flowing down from the hills, and test the gravel on the banks until they find what they seek. The prospector's outfit consists of as much provisions as he can carry on his back or pack on a pony, a couple of blankets, guns and ammunition, a few cooking utensils, a shovel and pick and a gold pan. The last is the most important after the provisions. It is made out of sheet-iron, and is shaped much like an extra large milk pan. The prospectors, who call each other partners or "pard" for short, agree to divide all they find; drudge along all day beside their ponies, keeping their eyes keenly upon the lookout, and slowly climbing toward the head of the ravine or gulch down which the creek flows. Finally they come to a point where the gulch widens out a little, or

perhaps where a rivulet flows down from the side hill, and a high bank of gravel has collected. Then they let their ponies feed upon the short grass, while they climb a little way up the bank and dig a hole a few feet deep. You may see these "prospect holes" all over the mountains; for many times nothing has been found at the bottom of them to justify farther operations there; and a man who is unlucky enough to dig many of these fruitless pits gets the reputation of being a "gopher" and finds himself laughed at.

Their "prospect hole" dug down to where the gravel is firm, they scoop up a panful of dirt and carry it to the margin of the stream. Then having picked out the large pieces of stone, one of the prospectors takes the pan in both hands, dips a little water, and gently shaking the pan, allows the water to flow over the edge and run away, carrying with it the lightest portions of the soil. This is done repeatedly; but as less and less of the heaviest dirt is left behind, greater care must be used. It requires much dexterity and practice to keep the bottom of the pan always lower than the edge, and at the same time dip up and pour out the water without throwing away more earth than you wish to.

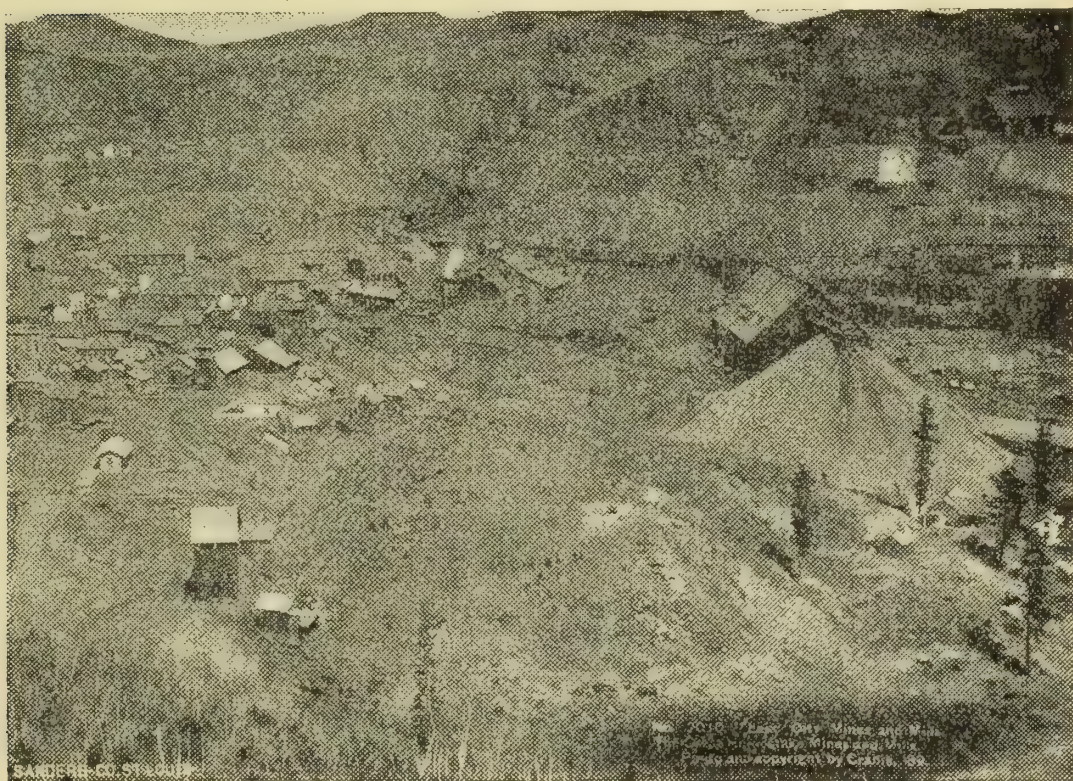
Careful management for eight or ten minutes, however, gets rid of everything except a spoonful of black sand, and among this if you have been successful, gleam yellow particles of gold which have settled at the bottom, and have been left behind in the incessant agitation and washing away of the earth, because they were heavier than anything else in the pan.

This operation is called "washing" or "panning out;" but it is not quite done yet, for the "colors" or particles of gold, must be separated from the black grains, which are mainly of iron or lead. By passing a magnet back and forth through them these will be dragged out, sticking to it, after which the gold left behind is weighed and its value estimated.

If a prospector finds he can average three cents to every panful of dirt, he knows he can make money by the help

of machinery; but if he is to do his work wholly by hand he must collect at least ten cents from each pan, and in the early days this would have been thought very moderate pay.

After testing here and there, our prospectors decide upon the best part of the gravel bank (which they would call a "bar"), and take possession of a small tract, or "claim," the amount of which is regulated by law; which "claim" they mark by driving down stakes upon which



LEAD CITY MINES AND MILLS.

are written the names of the claimants and the boundaries pre-empted.

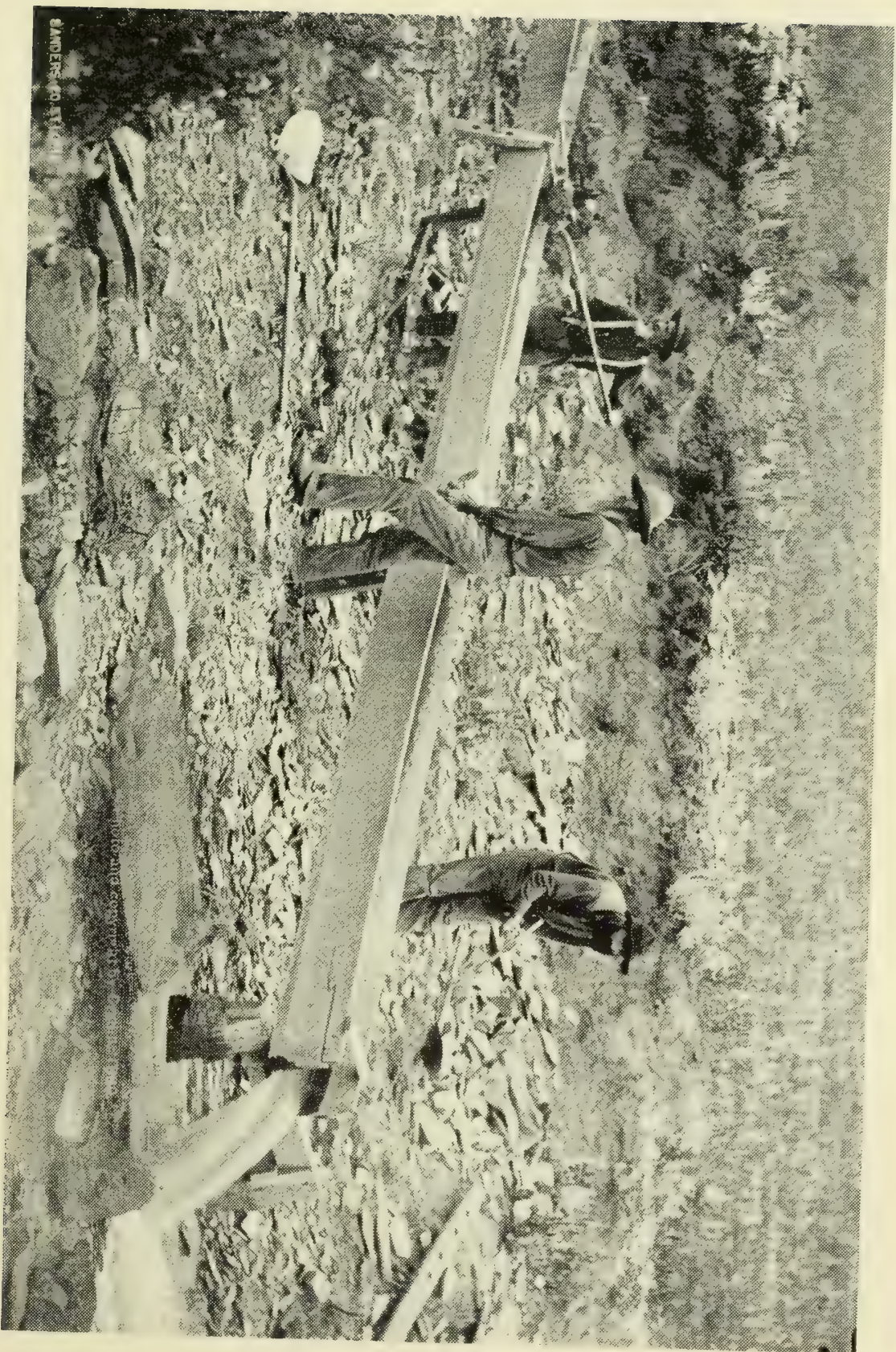
Our miners, let us suppose, prefer not to get their gold by the slow method of panning. They therefore procure some pieces of board and hammer together a "rocker," or "cradle." This machine takes its name from its resemblance to an old-fashioned baby-cradle. It is mounted upon two rockers, and its headboard is high enough to serve as a handle for moving it. Inside is arranged a series of three

or four sieves upon inclined supports, one above the other, the coarsest sieve being uppermost. There is no foot-board, for in its place projects a long spout out of which the waste water runs, which is fitted with cleats or "riffles" like those I shall explain farther on when I speak of the sluice. Into this cradle one man shovels the dirt and gravel, while his partner rocks it and pours in the water, which he dips out of the stream with a long-handled dipper. The big stones all shoot off from the surface of the cradle, but the dirt and small pebbles fall through upon the second sieve, through which, in turn, the finer half goes, and so on until the bottom and the spout catch the gold and retain it alone, while the water drifts the worthless stuff away.

The cradle is an old contrivance, and many forms of it are in use, some having only a single perforated partition to screen off the largest stones. It can be carried about wherever the miner finds it convenient to work, and it does not require a vast deal of water; lastly it calls for much less skill than most other methods of washing. Nevertheless the day of the cradle is nearly gone by, except where a single poor man goes off by himself to some retired spot and works not so much for wealth, as merely for the hope of getting a living. In its place the sluice-box has come to be the great instrument for gathering the gold out of a placer-bar.

In order to work a sluice to advantage there must be plenty of material to be handled and plenty of water. It is upon a sure supply of water that placer-mining depends, and it often happens that a bar that is worth very little might be worth a great deal, if only a stream could be turned through it. Sometimes the gravel are in the very bed of the creek, or on a level with it, and the poor stream, tortured out of its course, is sent into a dozen new channels, while the old beds are rocked through the creaking cradles, or go rattling down the stretching lengths of the hollow sluices. But, as a rule, it is necessary to bring the water in a ditch from some lofty point in the mountains

SLUICE BOX — PLACER MINING IN THE HILLS, ILL.



LANDERS CO. ST. LOUIS

down to the highest point of the placer. Sometimes all the miners stop work and unite in making the ditch, which they then own in common, at other times one or two men will pay for the construction of the ditch, which they then own, and from which they lease water to the miners.

You may see the little canals curving under the brows and along the retreating slopes of the hills, seeking in and out of all the windings a slant by which the water will steadily run downward. Now and then a rocky headland must be skirted or a deep gully crossed, and here the water is carried in a wooden flume, supported upon a trestle-work of poles or props. These aqueducts become a striking addition to the naturally strange scenery, in their rough outlines, as they struggle, all mossy, rude, and dripping, over and around great bronze-brown cliffs and along the green, velvet hill-sides.

Now let us examine how the ditch is made useful. When it is completed as many gates are made as there are mines to be supplied. Through these water can be drawn off. Then the water is let on, and flows gurgling and sparkling through the canal, bright and limpid as a natural mountain torrent. Meanwhile each miner has built his sluices. These consist of long, narrow boxes made of planking — one plank high on each side and two planks broad at the bottom. Sometimes only two or three of these boxes or troughs are placed end to end, sometimes a long line of them; but all along on the bottom, particularly down toward the lower end, are nailed crosswise, strips of wood like cleats which are known as riffles — I suppose because they make a series of little waves or riffles in the water as it flows over them. Usually, also, in addition to the cleats the bottom is paved with cobble-stones, so as to offer as many chinks and *crannies* as possible.

Now all is ready for extensive placer-mining; and opening the gates, which admits to the little channel that leads to the sluices, down comes the blue clear water, and goes dashing and foaming through the confined trough and worries past the riffles, until it finds itself free, at the “tail” to

run on down the valley whither it will. It is pure and sparkling when it enters, but in a moment becomes brown as chocolate with mud, for the miners are shoveling the earth and gravel into the sluice-boxes and the rivulet's play-day is over ; its work of gold washing has begun.

After my description of the cradle, I need hardly trouble you to read an explanation of sluicing. It is perfectly plain to you that, when the gravel is shoveled into the sluices, the swift current sweeps away all the light stuff, and rolls the round stones out at the end, while the heavy grains of gold sink rapidly to the bottom, and are caught behind the cleats, or between some of the paving stones. Usually the men help this process along by continually stirring up the bottom of the sluice-box with a shovel, so that too much beside the gold shall not stay behind ; and frequently some quicksilver is sprinkled in the bottom to attract the gold and hold it more securely.

This seems to be a very rude and clumsy contrivance in working after so precious a prize ; indeed it never seems quite right to dig and toss and treat so carelessly the rich soil of these mines ; but experience has shown that gold is so sure to sink through all this agitation and mass of waste rock, and so indestructible that these rough methods are good enough for this kind of mining.

The proof of this efficacy comes at night, or at the end of the week, when the clean-up is made. Then the water is shut off, the sluice is drained dry and all the big stones are thrown out. The black iron sand and other sediments at the bottom are scraped out of all the corners and crevices, and carefully washed. A rich panful of gold remains, perhaps hundreds of dollars worth, which is separated from the iron by the use of magnet, as before, and poured into the little buckskin bag, which forms the miner's wallet. Last of all, it is weighed and divided between the partners who are working the claim together. By the amount of the clean-up they judge of the worth of the claim if anybody proposes to buy it.

The general supposition is that a claim will average the

same yield of gold all the way through; but this does not always hold true. The gold occurs in pay-streaks, and two claims side by side, may be of very unequal value. The effort of every miner is to reach, or get to bed-rock as soon as he can, that is to the rocky floor upon which the gravel has been drifted and piled, for the reason that in the process of that drifting the gold has a chance to fall through the boulders and sift down to the bed-rock. He will tell you that it is paved with a sheet of solid gold, but often he finds hardly more than he met with on the way.

Sometimes it is only a certain layer in the bank which is "pay-dirt" and profitable to work. Then he pushes a tunnel into the side of the hill, and brings his gravel out on a wheelbarrow to wash at the opening. Men work all day in the tunnels, sometimes lying almost at full length upon their sides; and accidents occasionally occur, by the roof falling or otherwise.

In digging down to bed-rock it frequently happens that the hole or shaft becomes so full of water that no more work can be done. It would cost too much to pay a man to pump it out, and very likely one man or even a dozen men, would be unable to do it. But here is the water in the neighboring creek, or, if that is wanting, the stream from the big ditch, waiting to be harnessed to do the work. So the blacksmith is consulted, and an axle-tree, trunnions, and some other bits of iron-work, are forged. Then a framework is raised, a small water-wheel knocked together and hung in it, a flume laid, which pours a stream of water upon the wheel, and a rough gearing of poles so arranged that every time the wheel goes around the plunger of the pump is raised, and the water is pulled out. Sometimes the connecting-rod between the water-wheel and the pump is a line of aspen-poles, a hundred or two hundred feet long. This is supported, every dozen feet or so, upon standards, which are fastened on pivots to firm blocks on the ground, so as to move backward and forward with each lifting and sinking of the pump.

In hydraulic mining a stream of water is brought into the

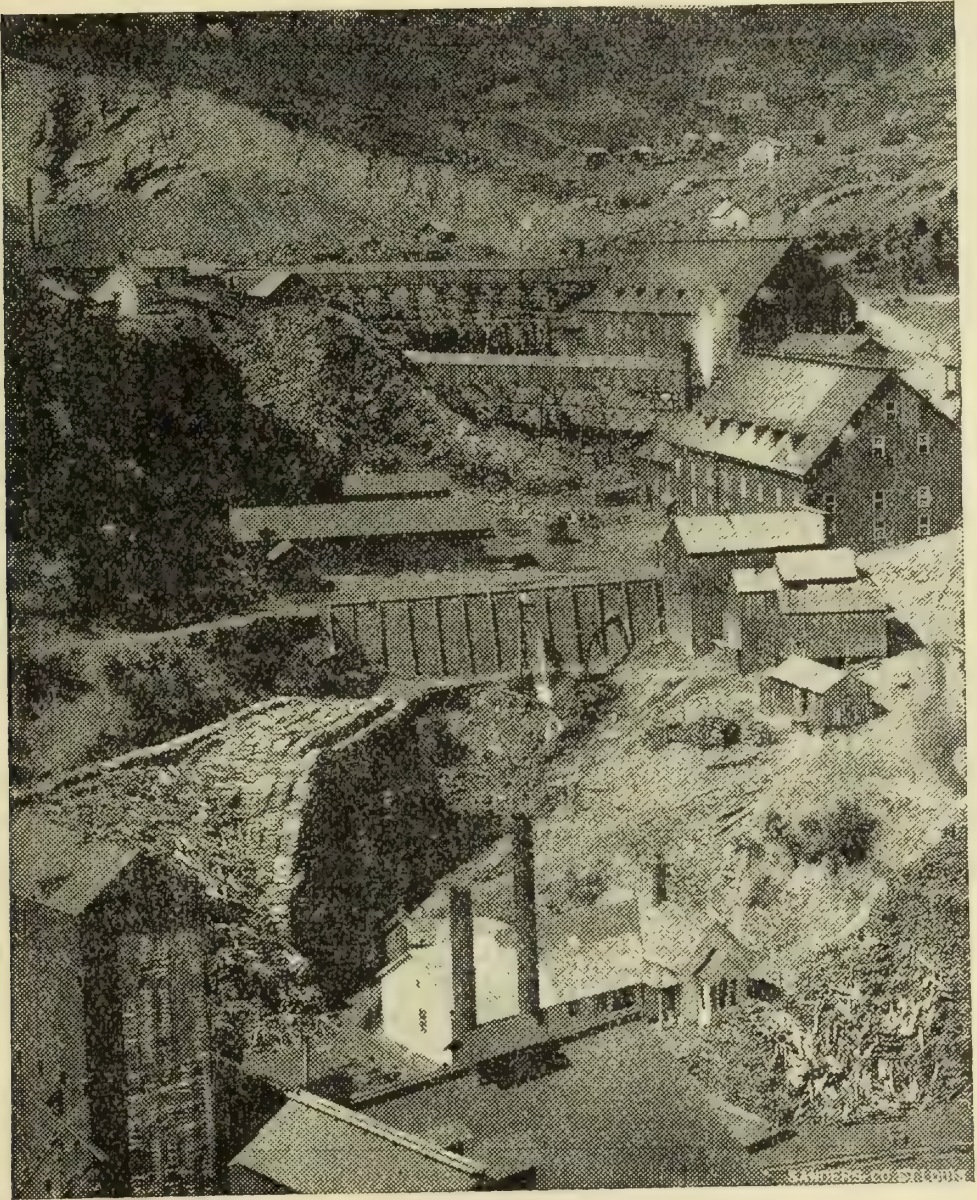
mine through pipes of iron or heavy rubber or canvas-hose, from so high a source as to give immense force to it when it leaps out of the nozzle. The fall must be from one hundred and fifty to two hundred feet, usually, to furnish the necessary "head," and upon the power which the water has depends the success of the enterprise. If the pipe is of iron it is a foot or so in diameter. It is made of sections, each about twelve feet long, and therefore can be lengthened or shortened, bent or moved about, as required. Into its upper end, away up on the steep hill-side, flows the water of the high-line ditch, or perhaps the current of a mountain snow-fed torrent. At the lower end of the pipe or hose is arranged a very strong iron mouth-piece, like the nozzle of a steam fire engine, only three times as big, which swings upon compound joints in its attachment to the pipe, so that it can be moved in any direction — upward, downward, or sideways.

So much for the water-power or hydraulic machinery. Now, observe how they employ it. Down at the edge of the creek there is room enough to lay their pipes and set up the "Little Giant," as they call their nozzle.

In the creek bed a little below has already been built a great sluice-box, sometimes a hundred yards or more long, and much more capacious than the sluices used in hand-work. Leading down to this a deep channel is arranged from the gravel-bank and all is ready. The flood-gates are opened, the big nozzle is pointed straight at the bank, the water resounds through the humming pipes or hose and rushes forth from the nozzle in a solid straight, ice-white beam, which bores its way into the bank and tumbles the boulders out, very much as a steady stream of cannon balls would do it.

It is great sport to watch this fierce attack of so much water, remembering that it is only its weight, and the force it accumulates in its eagerness to escape from the close pipes which is hurrying it on at this fearful speed. The bank crumbles, and bits of hard clay, small stones, and fragments of petrified wood are tossed high in the

broad fountain which flies backward from the point where the waters strike, and falls with a constant roar and rattle. The white, mist-hidden beam of water bores its way deeper and deeper, the mass of foam and broken earth changes and grows as the face of the cliffs and the directions of the



CALEDONIA, ETC., MINES.

nozzle are changed, and so the Little Giant rapidly eats his way into the gravel, and at the same time sweeps the loose material into the sluices by the very flood which his energy creates.

While all this picturesque enginery is in operation, above

them, down along the rough channel, stand men aiding the separation of the gold. They are picking the large worthless stones out of the stream, and piling them in an out of the-way place; they are walking about knee deep in the raging, mud-laden flood, continually poking out the heavier rocks and stirring up the bottom with shovels, in order that no gold may settle there. Through the stout sluice leaps a swift and noisy current, bearing in its thick waters thousands of minute flakes of gold, with now and then a nugget. These quickly sink to the bottom, and are caught by the riffles; so that the clean-up of a hydraulic sluice ought to be, and usually is, very rich, for a hundred times more earth is sent through it each day, under the tearing strength of the Little Giant, than ever shovels alone could handle.

Moreover, it often happens that there are five or six pipes and nozzles firing at the same bank. Then the destruction is very rapid, great masses of gravel being quickly undermined, and falling with a noise like thunder. The gold is collected from the sluice by shutting off the water, taking out the riffles, and scraping the bottom. Some quicksilver has usually been sprinkled in the sluice previously, and more is now added, the better to collect the gold, for which it has a strong attraction. The union of the two metals forms what is known as an amalgam, and there are two ways of separating them again. If the miners do not care to save the quicksilver (which is the same thing as the mercury in our thermometers), they put the amalgam in a bag, and strain out the quicksilver by squeezing, just as you press the juice out of grapes when jelly is to be made. Then the gold and the trifle of quicksilver remaining is placed upon a shovel and held over the fire until all the white metal passes off in vapor.

If, however, it is desired to save the mercury, the amalgam, as soon as it is cleaned out of the sluices, is put in a chemist's retort and heated. The mercury turns to vapor, which rises through a tube passing at a short distance through a box of ice or cold water, and is there condensed

or turned back to liquid again, when it runs into a jar and is ready to be used a second time. In this way the same mercury may be used over and over again with but little loss.

Sometimes several thousand dollars are the profits of a single week of hydraulic mining, but several hundreds would be a more ordinary estimate. Conducted on whatever system gold mining is not always so productive a business as it would seem at first glance. After all, an ounce of gold is only worth so much, and a pound only twelve times as much. To get a pound of gold requires much hard work, and a considerable outlay of money for food, for wear and tear of clothes, for rent of water, for purchase of machinery, etc. Sometimes the gains are enormous, but it is only a few who have become rich in gold diggings out of thousands who have struggled and failed. Nor as exciting or romantic as it seems, to live in this wild, outdoor picnic style, and to dig the shining, precious, poetic mineral out of the ignoble gravel where it has so long lain neglected, is it altogether enjoyable work.

You must be almost continually wet, and the water in the mountains is cold; you must handle all day long rough stones, heavy huge boulders, and shovel heavy dirt; you must swing the pick till your back aches, and waggle that rusty gold pan till your arms grow lame and your fingers sore, while the sun beats down straight and hot, or the chill wind cuts through your wet garments; you must work early and late, hard and fast, often defend your property by a little war, if you would equal your neighbors and hold your claim.

When a company of men find a new gold-gulch and begin to work at it, they call the village which grows up there a camp, and give it some name which is just as likely to be absurd as it is to be appropriate. Golden Gate, Sheep's Tail, Potato Gulch, Ruby, Black Tail, and Go-to-Hell Gulch, Two-Bit, and dozens of other comical names are examples. The miners hastily throw up little log cabins, six or eight logs high, covered with a roof of poles

and dirt, and having nothing better than the hard tramped earth for floor. In one end is the fire-place (the chimney is outside, like that of negroes' huts in the South), and at the other end are rough bunks, where the owner stuffs in some long grass or spruce-boughs or straw, and spreads his bed or blankets.

These miners (prospectors) all do their own cooking, but this was in former days no great art, or task, as when you had mentioned slap-jacks, beans, bacon and coffee, you were at the bottom of the "bill of fare."

CHAPTER III.

PROSPECTING FOR MINERAL BEARING ROCK.

Having established a headquarters the miners scouted out on prospecting expeditions in all directions. Of evenings, when they returned from the Hills, there was a big time among them, as they exhibited specimens of ore from the ledges they had discovered, and compared notes. All gathered about, and opinions were passed in regard to the values of the ores brought in.

The next business was to test the ore for the precious metals. In gold-bearing quartz, small specks of gold were often to be seen with the naked eye or aided by a small magnifying glass, such as every prospector carried in his vest pocket for use in the examination of ores. If gold could be seen at all, either with the naked eye or the glass, it was considered a good sign. In order to further test the specimen, it was then either beaten to a powder in a mortar or was ground as fine as flour on a large flat stone, using a smaller stone for a muller. This pulverized ore was then placed in a "horn," a little canoe-shaped vessel made of the split horn of an ox, when it was carefully washed out, much as auriferous gravel is washed in a pan. The gold, in case the ore experimented upon contained the metal, was found

lying in a yellow streak in the bottom of the horn, generally small particles of gold dust, almost as fine as flour.

This was the test for gold, and any miner was able to judge, from the prospect obtained in the horn, whether or not the quartz from which it came was rich enough to pay working in a mill.

In testing silver ore the miners in early days used acids. If a specimen of ore was supposed to contain silver, it was pulverized in the same way as gold-bearing quartz; it then was placed in the horn and the lighter matter it contained washed out. When that which remained in the horn appeared to be principally sulphurets and other metalline matter, the washing ceased. The heavy residuum was then washed from the horn into a matrass (a flask of annealed glass, with a narrow neck and a broad bottom). Nitric acid was then poured into the matrass until the matter to be tested was covered, when the flask was suspended over the flame of a candle or lamp and boiled until the fumes escaping (which for a time are red) came off white. The boiling operation was then presumed to be completed.

When the contents of the matrass had been allowed to cool and settle, the liquid portion was poured off into a vial of clear thin glass, called a test-tube. If the ore operated upon contained silver, the contents of the test tube would at once assume a milky hue. This would begin at the top of the liquid in the tube, where the salt solution first touched the solution of silver in the acid, and would be seen to gradually descend to the bottom of the vial. If there was much silver in the ore, the milky matter formed was quite thick, and clinging together descended to the bottom of the tube in the form of little ropes. Muriatic acid poured into the tube produced the same effect as the solution of salt and water. The white matter formed was the chloride of silver.

In case the prospector had any doubt about what he had obtained being the genuine chloride of silver, he held the test tube in the strong light of the sun for a few minutes, when the chloride would be seen to assume a rich purple color, a

color which no photographer would ever mistake. Those who wish to try this experiment may do so anywhere. If no silver ore is to be had a few filings of silver coin, or anything containing silver may be used. The boiling in nitric acid may be performed in an ordinary saucer and a common vial may be used instead of a test-tube.

The chloride of silver obtained in the bottom of the tube may easily be reduced to the metallic state. To do this it is dried and placed in a small hole scooped out in a piece of charcoal, when the flame of a candle is blown upon it until it is melted, and a bright little button of pure silver is obtained. Lead ore (galena) treated with nitric acid, as in testing silver ore, will produce a chloride somewhat resembling that of silver, but is more granular in appearance, does not turn purple in the light of the sun, and is dissolved in twenty times its bulk of water; whereas washing with water does not dissolve the chloride of silver, no matter how many times the washings are repeated.

If the presence of copper is suspected in the ore tested for silver, a bit of bright iron wire or the blade of a pen-knife may be dipped into the solution obtained from the specimen, either before or after adding the salt, when, if copper be present, the wire or knife will show a coating of it in the metallic state.

Chloride ores of silver cannot be tested by the acid method — they being chloride of silver in advance of the operation. Those ores must be subjected to the test of the fire-assay — must be smelted in a crucible. This being the case, our prospectors were not utterly cast down when their pet specimens failed to show silver when tested by the acid process. They at once declared that the silver was in the form of chloride, and were not satisfied that they were not millionaires, until they had carried their specimen to some assay office and had a regular fire-assay made. Then when the certificate of the assayer came, they were generally obliged to take a back seat, receiving the imprecations of the camp. Occasionally, however, a "big assay" was obtained. Then there was great excite-

ment. Every man in the camp wanted the lucky man to put him down in his notice of location for a claim of 200 feet — or a certain undivided interest. In order to get an interest in a claim that promised to turn out a “big thing” there was much pulling and hauling, buzzing and log-rolling among the miners who knew of the “strike.”

The assayer was an important man, and among the first to hasten to every new camp. As a rule he was a graduate from Freiberg or some American school of mines, eager to put his newly acquired learning to practical use. He is a mere boy perhaps. His hands are soft, his tongue unused to all the rough phrases and quaint slang of the camp; his frame so slight that one of those brawny pick-swingers could hurl him over a cliff with a single hand. But they are glad to see him, and however much they may laugh at his greenness in mountain manners, hold in high respect his scientific knowledge and ability, and wait with ill-suppressed eagerness for his report on the samples which they have brought to him for analysis, impatient to hear the word that shall pronounce them rich men or send them out again disappointed, to search still longer for the glittering prize the rocks so effectually hide.

Our young assayer builds a rough cabin like the rest, and proceeds at once to make himself a furnace. If he can get bricks so much the better, if not he will resort to stone and mud. His furnace is provided with a good draught, and contains as its central feature an oven called a “muffle” where the cupelling and scorifying is done. The “muffle” is a chamber of fire-clay, about eight inches wide and twenty inches long, much like a section of flat-bottomed drain-pipe. Meanwhile the young man has set somebody at making charcoal out of birch or pine-wood, for his fuel, and by the time he is prepared to go to work this is ready for him.

He also brought with him a bucking-board or a mortar, upon which to crush his ores; an anvil, several dozen of scorifiers, a mould and die for making cupels, tongs, bottles of acid, several scales of great delicacy, kept under glass

cases, and some lesser tools. This is his outfit, and it makes a very small and cheap appearance in his rude quarters. Many assayers in the town, of course, have very elegant offices and elaborate arrangements.

Now he is prepared to begin work, and hangs out a shingle. Before long a miner comes in, bringing a flour-bag full of fragments of stone and earth, and asks that its value be tested according to those scientific methods which, when properly managed, admit of no mistake in what they disclose. The assayer first makes a careful record of the specimens and assures himself that it is perfectly dried. If there is more ore than can well be handled, it is then "sampled" by being sprinkled upon a sort of wide-grooved gridiron, where a portion falls through and a part remains. The part remaining is then sprinkled over a smaller gridiron, and so on until a sufficiently small sample is left. This is to make sure that the portion tested is a fair average sample of the whole lot.

The next step is to reduce the sample to powder. This is done either by pounding it in an iron bowl or "mortar," with an iron pestle, or by crushing it under the sliding back and forward movement of a heavy round muller of iron on an iron plate the surface of which is slightly roughened. Fifteen to twenty minutes will suffice to produce a teacup full of dust out of the hardest stones; but not till the dust will pass through an eighty-mesh sieve, which is one almost as finely woven as a lady's handkerchief, is the assayer satisfied to cease his hard labor. The finer the dust, the more fusible or capable of wholly melting it is; and upon its complete fusion depends the success of the assay as an accurate test.

But the amount of ore which has been powdered is far too large to be carried through the furnace, for that is its destination. The sheet of paper that holds it, therefore, is taken to the balance room, and perhaps a twentieth of the whole, a thimble full or so, is put in the ore-balance against one-tenth of an assay ton, or two and nine-tenths grammes, the precise weight being ascertained with the greatest care. This

final "sample" is now placed in a "scorifier" (a small cup of fire-clay or some other refractory material) and mixed with twenty to thirty grammes, according to the quality of the ore, of chemical pure lead, a portion of this test-lead being saved to be placed as a layer over the surface of the rest, together with a few pieces of borax-glass used as a flux. The scorifier is then placed in the arched muffle of his furnace, where it is subjected to red heat, carefully though roughly regulated and is allowed to remain till a thorough fusion has taken place, part of the test-lead having then become rusted or oxidized, forming of the impurities a slag which covers the whole surface like a cake. In the process which has brought this result about, the test lead in melting has sunk by its greater weight through the mineral contents of the cup, and has collected all the gold and silver on its way, forming at the bottom a globule or "button" composed of an alloy, or chemical mixture of lead and precious metals.

Usually the assayer has some idea of the character of the ore he is at work upon, and knows pretty well whether there are both silver and gold or only one in it. As a rule, also, the ores of silver are pretty free from gold; and if he is searching for silver, all he has to do is to separate the lead and silver in the bottom to know what proportion of the latter it contains. The fusing operation just described having been completed, the scorifier is taken out of the muffle and its molten contents poured into a little deep mould. Several of these moulds are cast together into an iron frame, and resemble very closely the housekeeper's "gem" mould, whence issue the russet delights of our breakfast tables. When the molten material is poured into this mould the button falls to the bottom, and is covered by the glassy slag, which when cool is easily detached from it by a blow of the hammer on the anvil. This done the button is ready for cupellation and is placed in a cupel, which has previously been heated to redness in the muffle.

The "cupels" are flat cups of about an inch diameter and a third of an inch in height, which are pressed out of

white bone-ash by means of a brass mould and hand die, and may thus be made by the assayer as fast as required. This cupel and the button having been deposited in the muffle, the action of the heat upon the button causes a rapid change in the character of the lead contained in it; a portion of which passes up the flue in fumes of the most obnoxious properties; but the greater part is absorbed by the bone-ashes of the cupel, leaving the gold and silver free in the form of a more or less minute shining globule in the bottom of the cup. A quarter of an hour or so is occupied by this operation, and the instant the last trace of lead is gone (and the assayer knows it by the "blick" or appearance of rainbow colors, over the surface, caused by the rapid alternation of the red and yellow oxides of lead) the cupel is taken from the furnace and is allowed to cool gradually. After this the globule is weighed upon the balances of such precision that they will accurately determine the tenth of a milligramme, which, in round figures, is about one three-hundred-thousandth of an ounce. Pluck an eye-lash, lay it on one of these pans, and the beam of the scale will sink under its weight.

It remains now to calculate, from the weight of the silver pin-head remaining as the last memento of the ore-sample which had been so thoroughly subdivided, the number of ounces of precious metal to the ton of crude ore represented. This involves a pretty bit of mathematics, which, though intricate, I hope to make plainly understood. The "assay ton" is the unit of the system of weight in testing for silver and gold. An assay ton is arbitrarily assumed to be 29,166 grammes, which is the number of troy ounces in a ton of 2,000 pounds avoirdupois, therefore one milligramme has the same relation to an assay ton as one troy ounce has to the avoirdupois ton. Consequently, having found by weight how many milligrammes of silver remain from the assay (the sample having been determined before the test, you remember, to be exactly one-tenth of an assay ton) you know just how many ounces of silver there are to the ton of ore, since the two exactly correspond. The

tenth of an assay-ton of certain ore, for instance, is put through the furnace and yields six milligrammes, which is sixty milligrammes to the assay-ton. As the relation of the milligramme to the assay-ton is precisely that of the relation of the troy ounce to the avoirdupois ton, a simple proportion shows that the ore carries an average of sixty ounces of precious metal in every ton mined.

Should any gold be suspected to exist in the bottom, the "parting" of it from the silver is accomplished by the process of "inquartation." This consists in adding a considerable quantity of silver and re-fusing in a cupel in order to separate the particles of gold so that the silver can be acted upon by nitric acid, which is used because it is powerful enough to dissolve all the silver away. The fusing having been finished, the metal is placed in a little porcelain pan filled with nitric acid, and cautiously heated over a spirit lamp until all the silver has disappeared. Then the acid is thrown away, and the gold is saved by decantation, as the chemists say, which amounts to miniature "panning out." The gold remaining in the little pan seems like a black dust-black, because the grains are so minute that the eye is unable to perceive that any light is reflected from them; for it is the reflection of the light that causes gold in larger quantities to gleam yellow. If you put it under the microscope you will find that this dust of gold is not really dust in separated grains, but a connected lace-like network of gold wires, finer than any gossamer, and exceedingly beautiful. It is the golden skeleton of the button left behind by the acid, which has dissolved all the silver away from it. The last step of the work is to anneal this gold-lace into a little lump, when it is weighed, and its amount, and the value of the ore it represents, is announced.

Most of the tests, however, are of ores known to be valuable, but the exact worth of which it is desired to ascertain. When ore is to be smelted, also, in order to be cast into bullion, the assayer must first determine the proportion of the different minerals it contains in order to

know how much lime and iron and coke to mix with it, that the operation may succeed.

There is plenty of use for the scientific man and his furnace in a prosperous mining camp, therefore, and his business is a profitable, pleasant, and healthy one, so long as he preserves himself against inhaling the lead fumes that his fire-tests set free from the metals.

CHAPTER IV.

THE CHARITY OF "THE HONEST MINER."

He drifted down into the little mining camp late one afternoon in the early spring of '76. Where he came from no one knew, and no one felt sufficient interest in the matter to inquire. It was an every-day occurrence for mento come and go, to drift into the camp from points up in the mountains and drift off again over the hills, so that the coming or going of one man elicited no interest from the people of the camp.

He was a tall, rawboned individual, with a careless, swinging walk, and great long limbs encased in a pair of pants that held themselves so much aloof from his large cowhide shoes that a considerable portion of his lower limbs were exposed to view. No one knew his name and no one asked to know it, but as the days passed by and he continued to hang around the camp, people began to take notice of him, and when it became necessary to refer to him, spoke of him as "Shanks." Shanks proved to be a very quiet, unassuming individual, and cut as much figure in the society of the camp as the proverbial wooden man would have done. He might have seen better days and had perhaps possessed a certain amount of self-pride, but he bore in his person and habits no evidence of such things, and if they ever had existed, they had completely lost their identity. He became a part and parcel of the camp popu-

lation, floating along, taking what each day brought, with seemingly no thought for the future and no regard for the past.

To him time was nothing. It mattered not whether the sun shone or whether it did not. He made no complaint no matter what happened, and when there was talk of an Indian outbreak and the people of the camp were in a high state of excitement, he remained cool and calm as if there was no thought of danger. Some people said he was a philosopher, while others, and the great majority, said he was too indolent and lazy to take interest in anything. It is true that he never unnecessarily exerted himself. He drifted along in this "fancy free" condition for a couple of months, now and then, when hunger forced him to it, doing little odd jobs about the camp, but under no circumstances taking steady work.

He lived a sort of independent life, mingling but little with others, and soon came to be regarded as a nonentity by the people about him. In fact but little notice was taken of him, and he passed and repassed almost unnoticed and unobserved.

One morning some one in passing Shanks' tent heard groans within, and on entering found the man twisting about on his straw pallet with a high fever. For two days he had not been about the camp, but no comment was made on his absence as no one felt sufficient interest in him to speak of it. The doctor of the camp was called on, and after feeling Shanks' pulse and looking at his tongue said: "It's about up with him, boys, and he is in a fair way to go over the range."

"What'll we do with 'im?" some one asked.

"Jist as well let him stay thar an' die," another replied. "He don't know nothing now, an' he' jist es well die thar as anywhar else."

"Not while I got 'er cabin, he won't," spoke up a large man, who had always been considered the hardest character in the camp. "Not so long as Joe Riggs is able ter

wiggle no man won't be left here ter die in no sich er way as this. You fellers fall to here now an' help ter git the feller up here to my cabin, an' I'll take care of him der best I can."

The fellows fell to at once, for there was not a man in the camp who did not know Joe Riggs well enough to appreciate the value of his friendship, and not one of them but would have gone to almost any length to have avoided the consequence of his ire. More than once Joe had emphasized his dislike of a man with a sixshooter.

As long as a man treated Joe Riggs right, and refrained from too close an intimacy with his affairs, Joe Riggs was a friend to him, but the moment that man overstepped Joe's conception of right, safety of person demanded his immediate departure from the camp.

"Now, Doc," Joe said, when Shanks was stowed away in his own bed, "you tend ter this man, and if yere got any idee in medersin, an' know how ter dish it out so's ter pull him outer the mire, I want yer to do it. Ef yer don' know what's fer 'im, fill up on sumthing en' keep er tryin' till ye hit it. When yer done come around ter me fer yer pay. I been in this shape once myself, boys, an' I know whut it is ter suffer fer a little attention, an' ef Joe Riggs's considered a tough cuss, he's got little heart left fer a feller creature who is a sufferin', an' even old Shanks is worthy uv some kindness, an' he's er goin' ter get it, the best I know how ter give it ter him."

As day after day passed, and the sick man continued in a delirious state tossing his hands wildly about him and uttering wild broken sentences, Joe sat by his side and watched over him, with the tenderest care, no doubt in this kind office finding some sort of solace for his overtroubled soul. Joe's life in the West had been a busy, rushing one and no time had he found to indulge in thoughts of the past, of the years away back toward his youth, when he was an innocent soul and his hands were free from crime. But in the silent vigils of the quiet nighttime when all of the camp lay still in sleep, he sat through

the darkness, and his thoughts went back to the old home in the East.

Up through the gloom of the years came a trooping of memories, and above all and the brightest of all was the face of a fond mother. He shuddered as he recalled her



BLASTING ON FIRST RAILROAD TO BLACK HILLS.

love for her boy, and mentally measured the awful distance he had drifted away from her, and tears — the first that had come to his eyes for many years — coursed down his hard cheeks.

The men around the camp sometimes came in to offer their assistance, but usually Joe sat up alone during the

night, and he preferred it, for somehow since the fountain of the past had been opened and a stream of memories set to flowing through his mind, he loved to sit and enjoy his thoughts in solitude.

One day as Joe was passing the saloon, some of the loungers remarked:—

“Joe’s stickin’ ter old Shanks like er brother.”

“That’s whut he is. An’ its the queerest thing I ever seed, too. He’s ther last man in ther camp I’d a thought of a doin’ sech a thing. Thar’s sometin’ mighty curios erbout it. I’d never a dreamed o’ Joe takin’ no interest in a sick feller like ole Shanks’. He hain’t bin inter ther s’loons for several days, hed yer noticed thet?”

“I guess I had,” replied the barkeeper, “fer Joe’s allers bin one of the steadiest customers we had, an’ ef he was sorter quarrelsome sometimes, he wan’t never close with his money.”

“Joe wan’t never so bad a man, nohow,” said another, “es some people thought. When he was a friend to a feller he ’ould do anything fer ’im.”

“Yes,” said another, “but somehow he seemed sorter got er notion that ther world were ergin him.”

“Yes,” said another, “but how’d he ever come to take to ole Shanks, d’yer s’pose?”

Just then one of the “boys” called for the drinks, and the loungers dropped the conversation and stood up along the bar ready for an emergency.

One day the doctor came and pronounced the crisis passed, for he found the high fever had ceased, and the sufferer lay calmly sleeping, while his cheek was no longer hot and flushed.

“He’ll get well, now, the doctor said, if he has proper care.”

“An’ h’ll hev it,” Joe replied with emphasis, “if I ’m able ter give it ter him.”

That evening as the twilight was fading into night, Shanks awoke, and after his eyes had wandered around the room he fixed them on the face of Joe Riggs with a startled,

wondering gaze and for a moment the two men looked into each other's eyes.

"What does it mean?" Shanks asked, in a voice scarce above a whisper.

"You 've been nigh ter death," Joe replied. "Fer days ye've bin down with the fever. But you're all right now, the Doc says, only you 've got to be keerful an' not take no relapse."

"This is your cabin, Joe?"

"Yes."

"How come me to be here?"

"We found you down to the tent with a terrible fever, an' I hed you brought here."

"An' you 've bin a nursin' me?"

"Yas, I've bin er kind er helpin' you a little."

"You are a good man, Joe, and deserve my thanks. But I wish you hadn't done it. I wanted to die."

"Come, man, don't let us have none of that yer stuff."

Then after a little Shanks looked Joe in the eye with an almost eagle-like glance and asked.

"Did I talk eny when I was outer my head?"

"Yes, some," Joe replied.

"Did you understand?"

"Some things. I know what yer 're driving at, Shanks, an' on that point jist prepare to rest easy, fer yer never done it. You 've been suffering under a-what-you-call it? Anyhow yer 're all right. Jim Buster ain't no more dead than I be. He 's well and hearty."

"You are not joking me, Joe?"

"Jokin' ve? S'pose I'd be 'er joking 'bout sich 'er thing?"

"No, but it seems too good to be true."

"Well, it air true all the same. You never hurt Jim much when you shot 'im way back in Missouri ten years ago, an' it wan't a week till he started ercrosst ther plain. Jim wus deservin' of it all, an' he never suffered half as much as he orter hev suffered. For ten years he has wandered around in the West thinking all the time he had killed you

in ther scrimmage, for you know he shot at you an' you fell."

"Yes, I remember it all. It's never bin out o' mind an hour since it happened, and every day I've lived in the thought that I was a murderer, a murderer. Oh, what I hev suffered by that thought. But, how do you know about it when you er a stranger to my past life?"

"I ain't so much a stranger as you think. I ain't allers been Joe Riggs."

"Oh, heavens," Shanks cried raising his head by a great effort. "You air Jim Buster."

"You air right, partner. Thet's who I am."

"An' you tuck me in en cared for me."

"That's what I done. I did not know you was Frank Gibson till you tole in your ravings, an' it's no wonder I didn't for yer changed enough ter deceive yer mother. But I was glad, more glad then I can tell, when I found you out and knew I had not killed you."

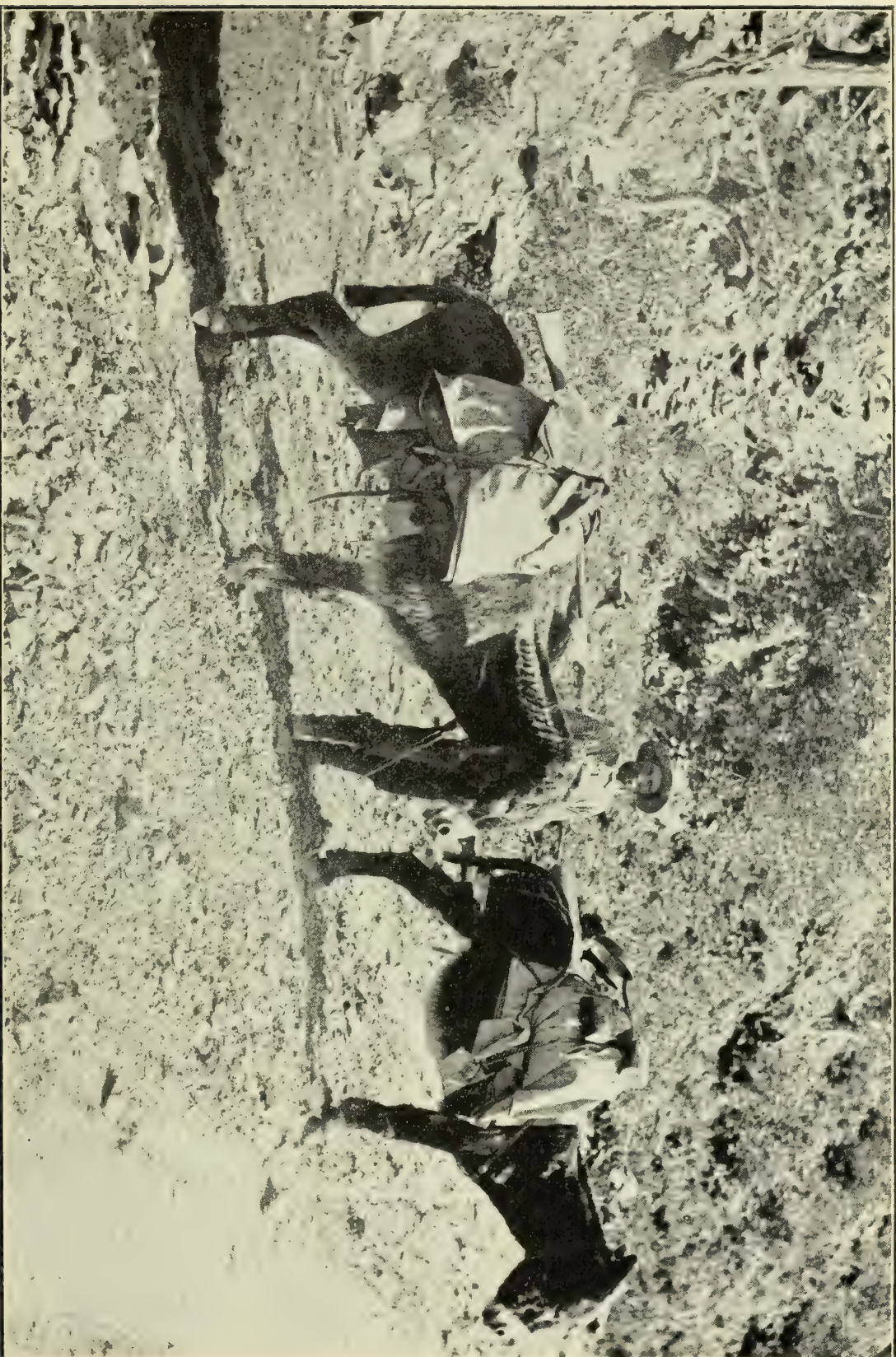
"And now, Joe," Shanks asked, "shall we shake hands and forgive?"

"Here is my paw on that proposition."

Shanks soon recovered, and he and Joe were always after that fast friends. With his new strength came a new life, and no one in all the diggings around the camp showed more interest in the affairs of life than he did. Joe, too, became a different man, for now that he could look at his hands and realize that they were free from murder, he no longer felt that the world was against him, and then those memories of the old home and his loving mother kept floating through his life to add sunshine and sweetness to it.

In the autumn when the Indian outbreak came and the people of the camp had to fight for their lives, Joe and Shanks were the first to go out, and among all the brave men none fought better than old Shanks. One day when peace reigned in the camp once more, four or five men were sitting in the saloon when one asked:—

"Joe has quit comin' 'round ter see the boys, hain't he?"



DONKEYS WITH MINER'S OUTFIT.

“ Hain’t bin since Shanks got sick last summer,” replied the barkeeper.

“ Him and Shanks seem ter be mighty good friends,” another replied.

“ Yas, an’ Shanks seems like another man since he got well.”

“ Ther’s something queer erbout thet business, boys, but I can’t tell what it is. Them fellers both changed wonderfully, Shanks is spry es er kittin, an’ Joe’s es quiet es er lamb.”

There was great change, but no one in the camp ever knew the secret of it.

PECULIARITIES OF MINERS.

“ Bed-rock Bill ” is a good fellow, an honest miner. This is not his baptismal and patronymic appellation as bestowed on him at an early age by his godfather and godmother, but a friendly appellation bestowed on him by his companions in toil, from the fact of his continually talking of bed-rock, working on bed-rock and receiving all the remuneration he acquired from bed-rock. For on that, he says: “ In his claim only lies his pay.” Bed-rock Bill had fine prospects; he toiled early and late, and each clean-up increased in value and gave inspiring hope of the future fortune of “ the honest miner.” His girl, too, was “ fair and fat, if not forty,” and the hopes of their speedy union inspired Bill to more exertion, till every nerve was strained to make his claim the richest in the gulch. But the true course of mining, like true love, does not always run smoothly. The new diggings were talked of. The big stampede commenced and poor Bill took the fever, a dangerous epidemic that his susceptible nature could not withstand, and heedless of the advice of friends, and the entreaties of his fair one, he sold his claim and made one among the many that numbered the prospectors.

His sad fate is better told by the “ Muse ” of the miner —

“ This is the man of whom we read,
Who left Deadwood for the big stampede;
He’s now returned all tattered and torn,
By looking for gold on the Big Horn.
He has no malt,
He has no cat,
He has no coat,
He has no hat,
His trousers patched with an old flour-sack,
With ‘for family use’ to be seen on the back;
His beard is slaggy, his hair is long,
And this is the burden of his song:
‘If ever I hear, if ever I read,
Of another great or big stampede,
I’ll listen, but I’ll take no heed,
But stay in my cabin at Deadwood.
Her brother Bill is going away;
He wants me to go, but I think I’ll stay;
He paid me ten dollars the other day
For a mule to go on the stampede.
He packed his load in half an hour,
Two gallons of whisky, one pound of flour.
He bought a shovel
And borrowed a pick;
He sported his watch
And went on tick
For a side of bacon and a can of lard,
Now look at his fate! my! isn’t it hard?
He walked all day and most of the night,
And now he is back a sorrowful sight,
To the cabin he built in Deadwood.
Now, boys, be steady and stay at home
Where you have got a good thing, you need not roam.
For most reports are froth and foam,
That come in from the stampede.
Deadwood, Whitewood, Golden Gate,
Potato Creek, Gold-Run, all are great,
Ten cents to the pan at any rate,
Is better than a stampede.
Leave not your friends or girl behind,
For how do you know what you may find?
When you return with Bill or John,
What’s been done since you’ve been gone:
Your girl not here,
The air is light,

With your friend
She took her flight;
Not caring for the love forlorn
Who now returns all tattered and torn
Bringing no gold from the Big-Horn
To the girl he left in Deadwood."

A miner thus describes his boarding house in the Camp :

The beefsteak is of leather,
And the pies are made of tin;
The bread you could not cut it with a sword,
The butter wears side whiskers,
The coffee is very thin,
In the little one-horse hash-house
Where I board.

About the liberality of the miner the following story is to the point :—

A certain gentleman, whose name for obvious reasons is not mentioned, was out through these hills prospecting, dressed in gentlemanly garb, and with the dignified yet gentle bearing that is his. At a certain point the stage upset, not an uncommon occurrence, but quite a startling one. Mr. — distinguished himself by his utter silence under the trying circumstances and by the gallantry with which he assisted the ladies of the party. After all had been straightened up again a red-shirted miner who had been watching the Chicago capitalist said to him: "Stranger, will you take a drink?" at the same time producing an old flask.

"Thank you," was the courteous reply, "I don't drink."

The miner subsided for a moment, and then taking out a villainous looking cigar, said, "Well, pard, will you have a smoke?"

"I appreciate your kindness, sir," said Mr. — "but I rarely use tobacco, and do not care to smoke at present."

The miner looked surprised. Presently they all alighted and partook of dinner in a rude frontier eating-house at \$1

a meal. When Mr. — came to settle, the clerk astonished him by saying. "The bill is paid; that party over yonder fixed it." Our townsman looked across at the covered porch, and there sat his friend the miner, tilted back in his chair, complacently smoking his big cigar. He stepped up to him with the word: "My friend, I understood that you have paid my bill. Now, I am very much obliged to you, but I have a little money of my own, and am perhaps much better able to settle the bill than you are yourself, and I insist upon paying it."

"No, you don't, pardner," broke out he of the red shirt, "we don't have much religion out this way, but I want you to understand that when a gospel sharp comes along we know how to treat him white?"

And the Chicago ex-drygoods man had to submit to being taken for a preacher.

A wedding in early days is thus described by an eye witness: —

About an hour before the ceremony was to take place the correspondent, accompanied by a leading citizen of the place was sent to the justice of the peace's cabin and found him poring over a large volume of the statutes of the territory, sweating like a horse, and looking terribly anxious. After greeting the callers he said: "The galoots that got up these yer laws hadn't gumption 'nough to last 'em ov'r night. I've run through this der blamed book an can't find a dod blasted word erbout matermony, an' how the hitching process is proceeded with. I've j'st to put the clamps on the couple, hit or miss, an' if I don't yoke them up legerly I can't help it." "Oh," said I, "do the best you can. Any kind of ceremony will do in this part of the country for no one will question the legality of the thing. I will post you as well as I can."

I explained to him how he should proceed, and the old man thought finally that he could worry through it. Ere long the couple appeared, followed by a crowd of the citizens of the camp. The candidates then stood up before the old judge, who, putting up all the airs he could command, to show

his dignity, said in the most solemn manner: "Feller citersen, this yar man and this yar woman have appeared before this court to be hitched in the legal bonds of wedlock. If any galoot in the mob knows of anything that will block the game ef tuk to a higher court, let him toot his bazoo or else keep his jaw to himself now and forever more. All in favor of me proceeding as authorized by law, say 'I.' " Everybody said, "I." "Contrary, 'No.'" Nobody said "No." "The motion is carried unanimously an' the court rules that there ha'nt been nut'ing to prevent the court from tryin' the case. Grip your fins." The candidates join hands.

"Amos Peabody, do you solemnly sw'ar thet you'll freeze to Maudy Thomas forever and ever? Thet ye'll love 'er and pervide fer 'er and treat 'er square and white, according to the rules and regulations sot down to g'vern sich cases in the laws of the United States, so help ye God?"

"Yes, sir, I do sir."

"That fixes yer end of the bargain. Maudy Thomas, will ye solemnly sw'ar thet ye'll hang on to Amos Peabody for all comin' time? Thet ye'll be to him a good, true, honest, up an' up wife, under the penalties prescribed by law fer sich cases, in an' for this territory; do ye sw'ar this, so help ye God?"

"I swear, I will."

"Then by the power in me vested as justice of the peace, in an' for this precinct, I announce ye, Amos Peabody an' ye, Maudy Thomas, wife an' husband, and legalize ye to remain as sich fer ever an' evermore; an' ye'll stand committed till the fees and costs in the case be paid in full, an' may God have mercy on yer souls, an' bless this yer union with his heftiest blessing."

The fees were adjusted and after the congratulations of the assembly the newly made husband and wife departed for their new home up the creek where they are happily living together.

A similar wedding occurred soon after before another

justice of the peace. He had been accustomed to draw up deeds, wills, and little else, when called upon to perform the marriage ceremony. When the parties appeared before him he addressed them thus:

“Hats off in presence of the court.” The hats being removed he continued: “Hold up your right hand.” It was done. “You, John Marker, do you solemnly swear to the best of your knowledge and belief, that you take this woman to have and to hold for yourselves, your heirs, executors, administrators and assignees, for your and their use and benefit forever?”

“I do,” answered the groom promptly.

“You, Alice Ever, do you take this your man for your husband to have and to hold forever, and do you solemnly swear that you are lawfully seized in fee simple and free from all incumbrances, and have good right to so bargain and convey to said grantee, yourself, your heirs, administrators, and assignees?”

“I, I —do,” said the bride doubtfully.

“Well, that there is worth a dollar and fifty cents.”

“Are we married?” asked the bride.

“Yes; know all men by these presents that I, being in good health and of sound mind and disposition, in consideration of a dollar and fifty cents, to me in hand duly paid and the receipt of which is hereby acknowledged, do and by these presents have declared you man and wife during your good behavior or until otherwise ordered by this court.”

CHAPTER IV.

LEGENDS.

Myth of the Scythians.—As the Scythians say, theirs is the most recent of all nations, and it arose in the following manner: The first man that appeared in their country, which was then a wilderness, was named Targitans; that he

had three sons, who went by the names of Lipoxais, Apoxais, and the youngest Colaxais. During their reign a plow, a yoke, an ax and a bowl of golden workmanship dropped down from heaven and fell on the Scythian territory. The oldest of the three brothers seeing these articles first, approached intending to take them up; but as he came near the gold began to burn; when he retired the second went to take up the articles and the gold burnt again. Accordingly the burning gold prevented them from taking any of the articles; but when the youngest went toward them the gold became extinguished and he carried the things home and thus became king. This sacred gold the king watches with the greatest care, and annually approaches it with magnificent sacrifices to render it propitious. If he who has the sacred gold happens to fall asleep in the open air on the festival, he cannot survive the year, and on this account they give him as much land as he can ride around in one day.

PERUVIAN FABLE.

In 1545, Diego Hualca, an Indian hunter, was pursuing a wild goat near Potove in Peru. Climbing up the face of a steep mountain he laid hold upon a bush in order to pull himself up over a projecting rock. The bush was torn out by the roots, when—lo and behold—a wonderful store of wealth was laid bare. In the roots of the upturned bush and in the loose ground the eyes of the hunter beheld glittering silver.

Hardly is there a State in the Union which has not its story of undiscovered or discovered mines of precious metals. This mine was pretty much the same in every State and in every region. Upon the removal of a large flat stone an opening resembling the opening of a cavern was seen. Entering this you found yourself in a great crevice in the rocks and the sides of this crevice were lined with silver or gold which you forthwith proceeded to chisel off with a hatchet kindly furnished you by your Indian guide. You worked rapidly as according to contract you had but a limited time to

remain in the mine. When the Indian at your side announced your time up the tomahawk was taken from your hand, even though you might have an immense mass detached, save a mere clinging thread. Only men who had saved the life of some Indian of renown were ever led to these caverns and they were invariably obliged to submit to be blindfolded, so that none of them were ever able afterwards to find their way back to the mines they had been shown.

THE ELDORADO OF MATHIEN SAGEAN.

In 1637, Mathien Sagean was with La Salle at the building of Fort St. Louis of the Illinois, and was left there as one of an hundred men under command of Tonty. Being desirous of making some new discovery, he obtained leave from Tonty and set out with eleven other Frenchmen and two Mohigan Indians. They ascended the Mississippi one hundred and fifty leagues, carried their canoes by cataracts, went forty leagues farther and stopped a month to hunt. While thus employed they found another river, fourteen leagues distant, flowing south-southwest. They carried their canoes thither, meeting on the way many lions, leopards and tigers, which did them no harm; then they embarked, paddled a hundred and fifty leagues farther, and found themselves in the midst of the great nation of the Ascanibas, dwelling in many fortified towns, and governed by King Hagaren, who claimed descent from Montezumas. The king like his subjects was clothed in the skins of men. Nevertheless he and they were civilized and polished in their manners. They worshiped certain idols of gold in the royal palace. One of them represented the ancestor of their monarch armed with lance, bow and quiver, and in the act of mounting his horse, while in his mouth he held a jewel as large as a goose's egg, which shone like fire, and which in the opinion of Sagean was a carbuncle. Another of these images was that of a woman mounted on a golden unicorn, with a horn more than a fathom long. After passing, pursues the story, between these idols, which stand on platforms of gold, each thirty feet square, one enters a

magnificent vestibule, conducting to the apartment of the king. At the four corners of this vestibule are stationed bands of music, which, to the taste of Sagean, was of very poor quality. The palace is of vast extent, and the private apartment of the king is twenty-eight or thirty feet square, the walls, to the height of eighteen feet, being of bricks of solid gold, and the pavement of the same. The people carry on a great trade in gold with a foreign nation, the journey to which lasts six months. He saw the departure of one of the caravans, which consisted of more than three thousand oxen, laden with gold, and an equal number of horsemen, armed with lance, bows and daggers. They receive iron and steel in exchange for their gold. The king has an army of a hundred thousand men, of whom three-fourths are cavalry. They have golden trumpets with which they make very different music; and also golden drums, which, as well as the drummers, are carried on the backs of oxen.

King Hagaren would not let the Frenchmen go till they had sworn by the sky, which is the customary oath of the Ascanibas, that they would return in thirty-six moons and bring him a supply of beads and other trinkets from Canada. As gold was to be had for the asking, each of the eleven Frenchmen took away with him sixty small bars, weighing about four pounds each. The king ordered two hundred horsemen to escort them and carry the gold to their canoes, which they did and then bade them farewell with terrific howlings meant, doubtless, to do them honor.

Such was the story, which so far imposed on the credulity of Minister Ponchartrain as to persuade him that the matter was worth serious examination. Accordingly Sagean was sent to Louisiana, then in its earliest infancy as a French colony. Here he met various persons who had known him in Canada, who denied that he had ever been on the Mississippi and contradicted his account. Nevertheless he held fast to his story, and declared that the gold mines of the Ascanibas could be reached without difficulty by the river Missouri.

BOOK VI.

CHAPTER I.

SOUTH DAKOTA AT LARGE.

We have seen that the Black Hills were included in the country claimed by Ponce de Leon on March 27th, 1513, and called Florida. The claim of the red men to the soil was not recognized by the Spaniards, and no European power disputed their possession till on the 15th of June, 1671, Daumont de Saint-Lusson laid claim to the northern portion of the territory for the crown of France. La Salle called the territory he claimed for France, on April 9th, 1682, Louisiana, and this was almost co-extensive with Florida. France ceded her rights back to Spain, April, 1764, and on the 1st of October, 1800, Spain retroceded the province to France.

Thomas Jefferson, President from 1801 to 1809, soon after his inauguration desired to secure to the people of the United States the free navigation of the Mississippi river, with a depot of trade at its mouth. His negotiation with Spain disclosed the fact that the same had retroceded Louisiana to France, in a secret treaty, October 1, 1800. He immediately instituted a commission to treat with France upon the subject. For this purpose Mr. Monroe was sent as special minister, to meet in conjunction with Mr. Livingston, the U. S. resident minister at Paris, a committee of arrangements appointed by the French Government. The mission was more successful than had been even hoped for. Napoleon was ready not only to negotiate upon the subject sought, but for a cession of the entire territory. A treaty to this effect was made on the 30th of April,

1803, by which the United States were to pay \$15,000,000, as follows: \$11,250,000 in money to the French government, and \$3,750,000 for the claim of American citizens for spoliation of their commerce by French cruisers, during the late quasi-war with that country. The \$11,250,000 to the French government was paid, but the \$3,750,000 estimated as the amount of spoliation to American citizens, has never been paid. The territory covered an area of 1,182,752 square miles, containing about twenty thousand inhabitants.

October 1st, 1803, all the new country lying south of what is now Arkansas, was formed into the Territory of Orleans, while the portion north of the south line of that State became the District of Louisiana, with the governing powers vested in the officials of Indiana Territory.

July 1st, 1805, the District of Louisiana was designated as the "Territory" of the same name, and the legislative power placed in the hands of a governor and three judges appointed by the President.

December 7th, 1812, the name of the territory was changed to "Territory of Missouri," and the power was granted to the people to elect a legislative body.

In 1819 an enabling act was brought forward for the State of Missouri, but an amendment prohibiting slavery being attached, it failed to pass. This opened the great slavery contest. Professor Alexander Johnston thus aptly describes the situation: "While the Union was confined to the fringe of States along the Atlantic coast the slavery question was not troublesome; and it was at first possible to unite the representatives of both sections in the admission of new States by using the Ohio as a dividing line between the States in which slavery should be prohibited and those in which it should be allowed. But when the tide of emigration had crossed the Mississippi and began to fill the Louisiana purchase, conflict was inevitable, for the line was lost."

The Missouri Compromise of 1820 was effected, and an act passed permitting Missouri to form a constitution, and,

to admittance, with the following boundaries: East the Mississippi, west the meridian $94^{\circ} 42'$ passing through the confluence of the Missouri and Kansas rivers, north parallel $40^{\circ} 30'$, south parallel $36^{\circ} 30'$, the famous line north of which the Compromise prohibited slavery in any other territory forever. The act of admission bears date August 10th, 1821.

As the States east of the Mississippi filled up, the Government adopted the plan of transporting the Indian tribes to specified reservations west of the Mississippi. By act of June the 30th, 1834, "to regulate trade with the Indians," all the territory west of the Mississippi, not included in the State of Missouri and Territory of Arkansas was denominated "The Indian Country," a geographical but not an organized political division.

When on the 28th of June, 1834, the Territory of Michigan was organized, it included, besides the present States of Wisconsin, Iowa, Minnesota and Michigan, only that part of Dakota lying east of the Missouri river. Likewise did the creation of the Territory of Wisconsin on July 3, 1836; of the Territory of Iowa on June 12, 1838, and of the Territory of Minnesota on March 3, 1849, only affect that part of South Dakota, lying east of the Missouri river. The part of Dakota lying west of the Missouri river was then called Mandan Territory, but had no legal recognition.

In 1844, Senator Douglas introduced a bill in Congress for the establishment of a Nebraska Territory, which was to include Kansas, Dakota, Wyoming, and so much of Colorado and Montana as then belonged to the United States, but the bill failed. In 1851, the inhabitants of the Platte country applied for organization as a territory, but the request was not acted upon. In 1852, a bill was introduced into Congress by Mr. Hall to the same effect. Being on the eve of a presidential election it again failed. On January 23, 1854, the Southern or slavery element, being sure of its strength, introduced the Kansas-Nebraska Bill, providing for two territories between the Missouri

and the Rocky Mountains; one west of Missouri between parallels 37 deg. and 40 deg. to be called Kansas, and the other north of latitude 40 deg. to be called Nebraska. The bill also repudiated as unconstitutional and repealed the Missouri Compromise of 1820, whereby slavery was forever prohibited north of latitude 36 deg. 30 min., and provided that hereafter any territory was free to admit or to exclude slavery as its inhabitants saw fit. The bill passed and the territories were admitted. Nebraska included then the present State of Nebraska, most of Wyoming, a part of Northwestern Colorado, Montana and all that territory of North and South Dakota west of the Missouri river.

When on the 17th of May, 1858, Minnesota became a State that part of South Dakota, lying east of the Missouri river, remained without legal name or existence.

In 1857, at Traverse-de-Sioux, Minnesota, a treaty was made between the United States and the upper bands of the Dakota Indians, by the provisions of which the Government became possessed of the first acre of land in Dakota, to which the Indians had relinquished their title. It embraced a strip of land in the upper valley of the Big Sioux river, covering the present towns of Sioux Falls, Flandreau and Medary, including that portion of territory lying between the Big Sioux and the Minnesota State line and taking in the western shore of Big Stone Lake. In the spring of 1857, the Interior Department sent A. S. H. White, an attache to the Indian Bureau, to visit the Yankton Indians, for the purpose of inducing them to send a delegation to Washington, with a view to negotiating a treaty ceding their lands in what is now South Dakota, to the Government. White's mission was unsuccessful, and in the fall of the same year, Captain J. B. S. Todd, of Fort Randall, where he was interested as post trader, at the request of the Interior Department undertook, with the assistance of Charles F. Picotte, who had great influence with the Indians, to persuade them to send a delegation to Washington to confer with the U. S. Government. The captain

was successful, and early in the winter of 1857, started for Washington, accompanied by Theophilus Brughier, Mr. Picotte, and the Indian chiefs, 16 in number; and on the 19th of April, 1858, a treaty was negotiated by which the Indians ceded all the lands owned, possessed or claimed by them, wherever situated, excepting their present reservation of 400,000 acres in Charles Mix County. Pending the ratification of the treaty considerable numbers of white people had come into the territory and settled on lands, but they were unceremoniously ejected by the Indians and their cabins destroyed. A few who were connected with the trading company were protected. Immediately after the ratification of the treaty, A. H. Redfield, of Detroit, Michigan, was appointed agent for the Indians and arrived in the territory early in July. Buildings were at once erected on the agencies and the Indians removed to the same. As soon as the Indians were removed, settlers flocked in upon the lands and located principally on Big Sioux Point, Elk Point, Vermillion and Yankton. Finding themselves without government the settlers at and around Sioux Falls resolved to organize a provisional government, and a Provisional or "Squatter" Legislature was elected in October, 1858, as will be explained by the following notice—copies of which notices were the first printing done in Dakota. The printing was done on small slips of paper, about two inches by five in dimensions and read as follows:—

“ ELECTION — NOTICE.

At a Mass Convention of the people of Dakota Territory, held in the town of Sioux Falls, in the County of Big Sioux, on Saturday, September the 18th, 1858, all portions of the Territory being represented, it was resolved and ordered that an election should be held for members to compose a Territorial Legislature.

In pursuance of said resolution, notice is hereby given that on Monday the 4th day of October next, at the house of....., in the town of....., in the

County of, an election will be held for members of the Council and of the House of Representatives for said Legislature.

The polls will be open at nine o'clock in the morning, and close at four o'clock in the afternoon of said day.

Dated at this 20th day of September, A. D. 1858."

(Dakota Democrat Print. Sioux Falls City).

Soon after the election, the Provisional Legislature convened, Henry Masters was elected President of the Council, and S. J. Albright, Speaker of the House. During the session Henry Masters was elected Governor. The first session of — to say the least — an irregular legislative body lasted but a few days, memorialized Congress for the organization of a new territory, and authorized A. G. Fuller to represent the proposed new territory in Congress.

On the 8th of November, 1859, the settlers about Yankton held a meeting with D. T. Bramble as chairman, and M. K. Armstrong as secretary, and adopted a memorial petitioning Congress for a territorial organization. A similar meeting was held at Vermillion on the 9th of the same month at which J. A. Denton presided and James McHenry was secretary. But the prayers of the people were unheeded, and amid the tumultuous preparation for a presidential election, and the muttering throes of a Southern rebellion, Congress adjourned leaving Dakota ungoverned and unorganized. Not to be discouraged by this partial failure, the pioneers assembled again in mass convention at Yankton, December 27, 1860, and again on January 15, 1861, and prepared earnest memorials to Congress, which having been signed by 578 citizens, were forwarded to the Speaker of the House of Representatives and to the President of the United States Senate. Congress at last granted the prayer of the petitioners, and the Organic Act was passed in February, 1861, and approved by President Buchanan on the 2d day of March, 1861, thus giving

Dakota a territorial government. The territory being at the time so far removed from railroads and telegraph lines the news did not reach Yankton until eleven days after the passage of the law.

Under the new boundaries, the territory, at that time, comprised all of the present *State of Montana*, the greatest part of Wyoming, and the eastern slope of the Territory of Idaho, besides the States of North and South Dakota, and contained about 350,000 square miles, being bounded on the north by the British line, east by Minnesota and Iowa, south by the Iowa line and the Missouri, Niobrara and Turtle Hill rivers, up and along the 43d parallel of latitude, to the Rocky Mountains; thence along their snowy range to British America. Some 70,000 square miles of this territory was situated east of the Missouri river, and constituted that country which had been trimmed off from the State of Minnesota in 1858; while a vast expanse of the new territory, reaching from the Missouri to the Rocky Mountains, was carved out of the old Territory of Nebraska, as formed in 1854. Dakota thus established constituted the largest territory in the United States, and afforded a river navigation of not less than two thousand miles.

In the month of June the Federal officers of the territory arrived and entered upon the discharge of their duties. William Jayne, of Illinois, was the first Governor; John Hutchinson, of Minnesota, Secretary; Philemon Bliss, of Ohio, Chief Justice; L. P. Williston, of Pennsylvania, and J. L. Williams, of Tennessee, District Judges; W. E. Gleeson, of Maryland, United States Attorney; W. P. Schaeffer, United States Marshal; George D. Hill, of Michigan, United States Surveyor General; W. A. Burleigh, of Pennsylvania, United States Agent for the Yankton Indians; H. A. Hoffman, of New York, Agent for the Ponca tribe.

A census was taken showing the population of the territory to be 2402.

During the summer of 1862, the first discovery of gold had been made in western Dakota, on the eastern slope of

the Rocky Mountains, within the present State of Montana and Idaho.

On the 3d of March, 1863, Congress constructed the new



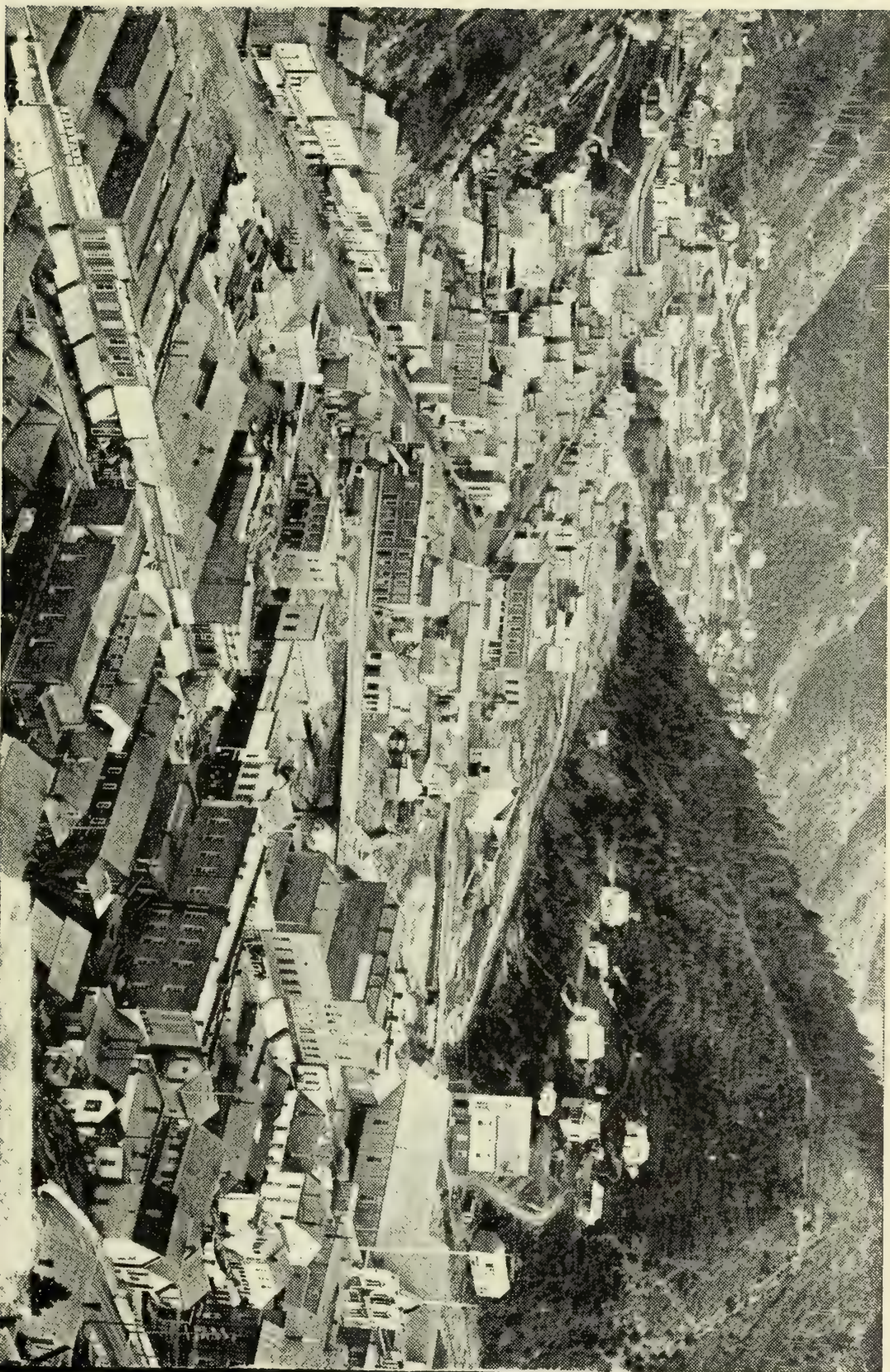
FIRST SETTLER'S HOME.

Territory of Idaho, comprising all that part of Dakota west of the 27th degree of longitude, passing northward through the Black Hills and near the mouth of the Yellowstone

river. Over twelve thousand people emigrated to the mountain mines of Idaho in 1863, and in May, 1864, the new Territory of Montana was framed out of eastern Idaho, with a population of ten thousand people, and a yearly product of seven million dollars in gold. July 25, 1868, the Territory of Wyoming was organized, taking from Dakota all the territory west of the 104th degree of longitude.

The idea to form the Territory of Dakota into a State developed as early as 1871. Hence for eighteen years the people of South Dakota have been laboring to accomplish what 1889 brought them. The first movement for Statehood in South Dakota disclosed the very general desire for division of Dakota Territory. On January 12, 1871, a memorial to Congress was passed asking for a division on the 46th parallel. A similar memorial was adopted December 31, 1872. The same memorial was adopted December 19, 1874, and again January 24, 1877. In 1879 a protest passed both houses of the territorial legislature against the admission as one State. In 1881 a memorial passed asking for division into three States. In 1883 another passed asking Congress to divide Dakota.

During the winter 1881-82 more than a hundred leading citizens of the territory went to Washington and urged Congress to enact a law enabling South Dakota to form a State. Such a bill was favorably reported to both houses but passed in neither. Bills in the legislature of the territory to the same effect never became a law. But the people were not discouraged but kept up agitation and on September 4, 1883, a convention of 150 delegates was held at Sioux Falls and framed a constitution which was submitted to the people of South Dakota at the regular November election and carried by a majority of 5,622 votes. But nothing resulted from this as far as congressional action was concerned and the matter was further agitated for two years, and so strong was the feeling that the legislature of 1885 passed a law providing for a constitutional convention at Sioux Falls, which met



DEADWOOD.

on September 8, 1885, and framed the constitution which, with but a few changes, is the constitution of the State of South Dakota.

In compliance with the schedule and ordinance of the constitution of 1885, the legislature met at Huron, the then temporary capital, on the second Monday of December, and listened to Gov. Mellette's message, and later elected Judges Moody and Edgerton United States senators.

But nearly four years passed, after all this had been done, before South Dakota gained Statehood. Under an act of Congress, approved February 22, 1889, a third constitutional convention was held at Sioux Falls, beginning July 4, 1889, to revise the instrument framed in 1885 to conform with the famous Omnibus Bill. This session lasted thirty-two days. The constitution was again submitted to the people as revised, voted on October 1, 1889, and adopted by a large majority. The vote on prohibition also made that a part of the constitution.

CHAPTER II.

DEADWOOD.

According to some authorities Ed. Murphy and others from Montana visited Deadwood gulch in the late autumn of 1875, and were the first discoverers of gold. Murphy wrote to John Hildebrand, who in April, 1876, came on from Montana bringing a considerable party with him.

On the 13th day of November Frank Bryant found gold in Deadwood while hunting deer, and on the 15th of the same month he, with one of his party, commenced to prospect Deadwood gulch, and on the 17th the following notice was written on a spruce tree by Bryant:—

“ We, the undersigned, claim three hundred (300) feet below this notice for discovery, and nine hundred (900)

feet or three claims above this notice for mining purposes.

FRANK S. BRYANT,
WILLIAM CUDNEY,
W. H. CODER."

It was not long before the whole distance of the gulch, from Gayville to Crook City, was staked off and located by the new-comers. A Mr. Wheeler and his partners took out of one and a half claim on Deadwood creek \$140,000 in gold dust and this brought a great rush to the gulches of Whitewood and Deadwood creeks; the whole district was soon occupied by the miners. In January, 1876, the Deadwood gulch was staked off in forty placer-mining claims. A local recorder was duly elected and the lots numbered and duly placed on record. They were distributed among the claimants by lot, the numbers being all placed in a hat, and then one drawn at the time. Each miner took hold of his claim and erected his cabin thereon where he best could find room; down near the bottom of the creek or high up on the hill-side, as fancy and convenience dictated. The towns of Montana City, North and South Deadwood, Fountain City, Chinatown and Cleveland grew up rapidly; all these form now the busy city of Deadwood. Where Main street is now the ground was as rugged and wild as any that could be found on the continent, and the first comers disputed with the wild beast of the forest for the possession of the locality; a large grizzly bear was killed on McGovern's Hill.

The whole gulch was covered with a dense growth of pine timber, much of it dead (which suggested the name of Deadwood) and a tangle of nearly impassable underbrush.

According to the *Pioneer*, the town of Deadwood was laid out April 26th, 1876, by Craven Lee, Isaac Brown, J. J. Williams and others. A provisional city government was organized and E. B. Farnum chosen mayor. Farnum was a merchant, and held his court regularly, sitting on a sack of flour or box of bacon, dispensing justice with an impartial hand. The council was made up of Keller Kurtz, Sol

Star, Frank Philbrook, Joseph Miller and James McCauly, with John A. Swift for city clerk, and Colonel Stapleton city marshal. At the time of the location the country had



A.B. Greene. del

NEAR DEADWOOD IN THE 90's.

not been open for settlement by the whites, and Indian scares and depredations were common. But the thirst for gold overcame all difficulties, brought thousands to these wilds, and in less than a year Deadwood grew from a few log-

cabins to a city of seven thousand inhabitants, with buildings and improvements that were valued at one million of dollars and business in proportion.

Gold dust was the medium of exchange and everybody carried a sack or bottle to hold their change. Every place of business kept gold scales to weigh out the change required. Everything had two prices, one for gold and the other for greenbacks; the currency price being ten per cent less than the gold price.

At this time Dr. McKinney was acting the part of "Lord-Chief-Justice" to whom all claims of dispute were referred. The *Pioneer*, the first newspaper published in the Black Hills (June 8th, 1876), by W. A. McLaughlin and A. W. Merrick, and continued ever since, though under different proprietors, gives some very interesting information in its first volume. It says in one of its first issues: "Bustle and confusion was prevalent everywhere. Each day and almost each hour witnessed the arrival of greater or less parties of gold seekers who, finding some eligible location to corral their wagons or pitch their tents, immediately mixed with the throng and became one of us. Glowing reports filled the air. Placers yielded fabulously, and quartz brilliant with gold passed from hand to hand. Speculation in town lots amounted to a furore of the wildest kind. Everybody wanted to buy real estate; all did who could. Building was at its height, taxing to the utmost Boughton and Berry's sawmill which stood on Sherman street and was in continuous operation. Help of all kind was in great demand, and he who could saw a board or drive a nail commanded almost his own price.

Saloons multiplied astonishingly, and gambling was carried on without limit and without regard to hours — in fact all hours, day and night, were alike — and "always open" the motto of all. C. H. Wagner opened the first resemblance of a hotel — the Grand Central — and was speedily followed by Jimmy Vandoniker with the IXL. Both houses did an immense business from the start, it being considered a luxury to occupy a chair in the office

during the night. The first practicing physician was Dr. McKinney; the first druggist Julius Deetkin; Joseph Miller and William George the first attorneys at law; Furman & Brown opened the first general stock of groceries; M. M. Gillette the first jewelry establishment; Bear & McKinnis the first wholesale liquor store; Gardner & Thompson erected the first frame building on the ground since occupied by the Nye's block; and among the early business men were: Miller & McPherson, Garrison & Co., William Munter, J. M. Woods, Evans & Herrick, John N. Nye, Hildebrand & Harding, Jensen & Bliss, D. P. Burnham, Mathien & Goldberg, Wardner & Bittinger, Eiler, McCaffery & Co., Ben Bear, Browning & Wringrose, Ben Holstein, Gib. Stone & Co., R. C. Lake, Graves & Curtis, William Brown, Cuthbertson & Young, Vaughn & Decker, C. W. N. Ruggles, John Ammermann, King & Gregory, Frank Welsh and others.

The first theater was opened on July 22d, 1876. The building, a frame, was inclosed around the four sides but had a canvas roof, and the floor was of earth covered with sawdust. It is said that during the first performance a heavy rain fell, drenching the audience and the stage; but the play went on and the greater part of the audience remained.

On October 7, 1876, the organization of the village of Deadwood took place.

The years 1876 and 1877 were characterized by much lawlessness and a considerable number of men were killed in the frequent quarrels. The town was full of gamblers and shooting was a common pastime. About the first of August, 1876, one Jerry McCarthy killed Jack Hinch. Jerry made his escape to Fort Laramie but he was arrested and brought back. The trial took place at Gayville. A. S. Simminton acted as the court, John A. Smith was clerk, A. H. Chapline attorney for the prosecution, and Joseph Miller for the defense. A guard of twenty men took the place of the sheriff and posse. A jury was drawn, witnesses were present, and the trial, which took place in the

open air, continued into the night. The jury rendered a verdict of not guilty. The mob were in favor of lynching the jury, but the guards leveled their weapons and stood them off. The prisoner was taken out a back door, brought to Deadwood, given a horse and gun, and directed to get out of the country as soon as possible. He leaped into the saddle, put spurs to his horse and with one farewell whoop disappeared at full speed down the gulch.

On the second of August, 1876, occurred the murder of "Wild Bill," the famous Indian scout, gambler and pistol-shot of the frontiers, by Jack McCall, another of the same stripe, who claimed that Bill had killed his brother, which was quite likely true.

Wild Bill was in a gambling saloon on Main street, busy playing cards, when McCall crept up behind him and shot him through the head. The assassin then backed out of the saloon and down the street with a heavy cocked revolver in each hand, and escaped for the time being. He was afterward captured, tried before a provisional court and acquitted. Subsequently he was arrested by the United States marshal and taken to Yankton, where he was tried in the district court, convicted for murder and promptly executed.

On the same day on which Wild Bill was murdered a Mexican came galloping up Main street, with the head of an Indian from which blood was still dripping, hanging on the horn of his saddle. The people believed that an attack by the savages was imminent and the excitement was great. They made up a purse of sixty dollars and presented it to the Mexican for his heroic deed.

Mr. William Doyle, dealer in lumber, on Elk Creek, near Tilford, gave me the following information as to how the Mexican came in possession of his "trophy:" "On the first day of August, 1876, a band of Indians dashed into Crook City and stampeded all the horses that were running loose about the place. Before the surprised inhabitants could check them they were fast disappearing across the plains with stolen horses. Every man in town who could secure



REV. H. W. SMITH.

a horse to ride armed himself and went in pursuit. Among the number was one Felix Rooney from Potter Co., Pennsylvania, who, together with another horseman, rode up to the bluffs back of the town in time to see the Indians in the distance but out of reach of their guns. In order to observe their movements, Rooney's companion returned to town to get a field-glass, while Rooney dismounted and laid on the grass close to the bend of the ridge. His horse was grassing and Rooney held it by his lariat-rope. A bullwhacker coming along, dismounted and stopped for a short time with Rooney. Both men were well armed. Soon an Indian appeared in full war dress, dashed up to Rooney's horse, apparently thinking that the animal was picketed. On seeing Rooney he grabbed his rifle but somehow the same was fast in some way; he then drew a forty-five caliber Colt revolver and aimed it directly at Rooney. This one was taken by surprise and alarmed to such extent that he never thought of his gun but fell flat to the ground the moment the Indian fired his revolver. He afterwards said that he felt as being shot. He soon discovered to his great delight that he was alive and that the Indian was the dead man. At the moment the Indian leveled his gun, the bullwhacker fired and killed him. As the people of Deadwood had offered a reward of \$200 for an Indian scalp, the aforesaid Mexican finding the Indian soon after, took his scalp and brought it to Deadwood expecting the reward. He got sixty dollars, went on a spree and before it was over he too was killed between Deadwood and Crook City."

On the same day on which Wild Bill was killed (August 2d), Rev. H. W. Smith, a Methodist minister, was killed on his road from Deadwood to Crook. He had come to the Hills of his own accord, and preached first at Custer, in a log-house with sawdust floors, on May the 7th, 1876. He left Custer, May 22d, preached in camp at Box Elder and arrived in Deadwood May the 25th. The first record of his preaching is in the diary of Mr. E. G. Phillips, that he preached in the street on the corner of Main and Gold street, Sunday, July the 9th. He supported himself by

his labor, and preached in the cabins of the miners or on the crowded streets. It was no uncommon sight to see him hold the attention of one end of a crowd while at the other end the attention of the same crowd was held by a broker or prospector. On the day referred to and against the remonstrances of his friends, he started to walk to Crook City, there to hold service; but he had only proceeded a few miles from Deadwood when he was shot by an Indian in ambush. Information quickly reached the city and a strong scouting party was organized and started in pursuit of the red men, but its mission not only failed, but resulted in the death of Charles Holland, Isaac Brown and C. Mason, who corralled a solitary Indian on Falls-bottom near Burton's stockade. The latter was strongly intrenched and entirely screened from view by bushes and a mound of dirt, and succeeded in standing off the whites with loss as stated, and ultimately escaping under the cover of night.

Indian excitement was now at its height and the people made frequent demands for military protection. General Crook replied to these demands in the following manner: —

“ HEADQUARTERS DEPARTMENT OF THE PLATTE. }
IN THE FIELD. }

To the Hon. Mayor and Council of the City of Deadwood.

GENTLEMEN: Referring to the petition of your citizens regarding that troops be stationed in your vicinity for their protection, I have the honor to state that after consulting with Lieutenant-General Sheridan, it was thought that the operations of troops which are about to be inaugurated in your vicinity will afford better protection than the permanent location of a detachment at any one point. I recommend, however, that your citizens organize so that they will be effective for their temporary protection in case of any unforeseen emergency,

I am, gentlemen, very respectfully, etc.,

GEO. CROOK, Brigadier-General.”

CHAPTER III.

GENERAL CROOK IN THE BLACK HILLS.

On the 4th of August, the organization of the Big Horn and Yellowstone Expedition of 1876 was announced. The cavalry (Second and Fifth), were organized into a brigade of five battalions with five companies to each battalion. Colonel Merritt was announced as chief of cavalry. Lieutenant-Colonel Carr resumed command of the regiment, which he retained until the expedition was disbanded. Major Upham commanded the first battalion, consisting of companies A, B, G, I, and M, and Major Mason, recently promoted to that grade in the Third Cavalry, continued to serve with the regiment, and commanded the second battalion, consisting of companies C, D, E, F, and K. Lieutenant-Colonel Royall commanded the Second and Third Cavalry, with Major Evans and Captains Noyes and Van Vilet as battalion commanders. Ten companies of the Fourth, Ninth, and Fourteenth Infantry regiments were commanded by Major Chambers, and a better body of officers and men were never assembled in the army. The Crow and Shoshone allies were commanded by Captain Randall, of the Twenty-third Infantry, and the volunteer scouts were in charge of Major Stanton, of the pay department.

The order of movement was brief and simple: —

“ All tents and camp equipage, bedding, and baggage, except articles hereinafter specified, to be stored in the wagons, and wagons to be turned over to the chief quartermaster at sunset. Wagons will be left at camp. A pack train of mules will accompany each battalion on the march, for the protection of which the battalion will be held responsible. The command will march at seven o'clock a. m., to-morrow, “prepared for action,” and company commanders will see to it that each man carries with him on his person one hundred rounds of ammunition, and four

days rations, overcoat, and one blanket on the saddle. Fifty rounds additional per man will be packed on mules. Four extra horses not to be packed, will be led with each company. Currycombs and brushes will be left in wagons. Special instruction for action: All officers and non-commissioned officers to take constant pains to prevent wastage of ammunition."

On the morning of August the 5th at the appointed time, the Big-Horn and Yellowstone Expedition marched from Goose creek, the infantry taking the advance at six o'clock, and the cavalry following an hour later. The command marched down Tongue river for two days, and then turned northwest and crossed the Panther Mountains to the Rosebud — the favorite cemetery of the wild Sioux — and down the valley on the trail over which Lieutenant-Colonel Custer, of the Seventh Cavalry, made his last march when going to the Little Big Horn, until the 10th, when the forces under General Terry were met thirty-five miles above the mouth of the stream, but the enemy had disappeared.

They had turned eastward from the valley of the Rosebud, at the place where the forces of Generals Terry and Crook had united, to avoid a battle with the troops, who were encamped a few miles below. The Indian trail, the largest ever seen on the plains, spread out like a fan when it reached the Uplands. Sitting Bull and his allies had determined to hasten toward the Canadian line and seek safety on foreign soil. The Fifth Infantry was at once faced about and marched to the Yellowstone, where the regiment was embarked on steamboats and patrolled the river to intercept, if possible, the retreat of the savages. On the morning of the 11th the united forces crossed the divide to Tongue river and marched down the valley on the trail until the 14th, and thence across the divide to Powder river and down the valley to the Yellowstone, where they arrived on the 17th, but it was evident that the Indians had separated and effected



Sitting Bull

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their escape. Sitting Bull was moving toward the Canadian line, and Crazy Horse had turned toward the Black Hills of Dakota. Violent rainstorms had added greatly to the discomforts of the troops, who were unprepared for the inclemency of the weather; but they had plodded on through the mud and rain with unfailing good humor, although there was not a man who entertained a reasonable hope of overtaking the Sioux. The united forces rested on the banks of the Yellowstone until the 24th, and then marched up Powder river about twenty miles. On the 26th General Terry returned to the Yellowstone, and the Big Horn and Yellowstone Expedition marched due east and arrived at the head of Heart river on the 5th of September. The rainfall had been incessant, and the supplies received on the Yellowstone were nearly exhausted — but two and a half days rations of bacon and hard bread remained on hand. Mud and water reigned supreme — and there was no prospect of catching anything, not even a jack-rabbit.

General Crook could go to Fort Abraham Lincoln for supplies, but if he did so he would consume valuable time and leave the Black Hills in a defenseless condition, as all the Indian trails seemed to lead in that direction; or he could move directly south, through an unknown country, to the Black Hills, having a chance to strike the Indians en route, and obtain supplies at the end of the march. The men who were serving their first campaign hoped that he would go to Fort Abraham Lincoln, but those who had served in other campaigns with General Crook believed that he would march towards the Black Hills, and he did. It was useless to pursue any longer. He could only hope to protect by the presence of his command, as the Indians had scattered to every point on the compass. The horses were leg-weary, quite a number had been abandoned, and dismounted cavalrymen were daily joining the infantry battalion.

On the morning of the 6th of September the Expedition, numbering two thousand men, began the march south, by the compass, for the Black Hills. Much could be written of

the hardships that followed — of the lack of food and shelter in pitiless and incessant rainstorms, and the weary marches that had to be made when men and horses were alike exhausted; but let it be stated that the officers and men, subsisting on wild berries and horse meat, plodded along for days, crossing Cannon Ball, the north and south branches of Grand river, and Owl and Crow creeks, without abandoning the determination to pull through. On the night of the 7th Captain Mills and one hundred and fifty men of the Third Cavalry, mounted on the most serviceable horses of that regiment, pushed ahead for the settlements to purchase supplies for the command. Two days later a courier returned with the news that Captain Mills had captured Roman Nose's village (Brule Sioux) at Slim Buttes, but that he was in great danger of being overpowered so soon as the escaped warriors could return with reinforcements. It was wonderful to see how eagerly the cavalry pushed forward to the rescue, and at eleven o'clock a. m. they had arrived at the scene of action, and not much behind them was the superb infantry. It was ascertained from the prisoners that Crazy Horse, with three hundred lodges, was about twenty miles away, but owing to the jaded condition of the men and horses, it was impossible to make a demonstration against him, but as was fully expected, he made a demonstration against the command between three and four o'clock p. m. with a large force of warriors. Quick as a flash of lightning the men formed a magnificent skirmish-line around the camp and inclosed the village, prisoners, horses, and captured ponies; the onslaught of the enemy was greeted with ringing cheers. The men in their eagerness did some wild shooting at the beginning, but they soon set to steady work, forgetting that they were hungry and wet.

Crazy Horse made persistent efforts to find a weak place in the line through which he could charge and recapture the ponies; but his efforts were of no avail, and he retired at nightfall, having been completely foiled at all points. The casualties among the troops did not exceed

twenty. The enemy's loss, thought to be quite severe, was not ascertained. While the combat was not a sanguinary one, it was decidedly picturesque, and as the twilight fell the skirmish line could be distinctly traced around the entire circle by the flashes from the muskets and carbines as they were discharged. The capture of the village at day-break was a Third Cavalry success, but the entire command participated in the afternoon skirmish with Crazy Horse. A Seventh Cavalry guidon, Captain Keogh's gauntlets, cavalry saddles, uniforms, and three horses belonging to the Seventh Cavalry were found in the village, which seemed to prove that Roman Nose and his followers had participated in Custer's last battle on the Little Big Horn. A quantity of dried meat and four hundred ponies were captured, which afforded a happy change from the horse meat upon which the officers and men had been subsisting for several days. The command resumed the march next morning, leaving the first battalion of the regiment, under Major Upham, to destroy the village. The enemy renewed the attack with great vigor before the rear of the main column was out of sight; but after receiving a severe punishment they withdrew, and nothing more was seen of them. On the night of the 10th Captain Mills was again sent forward with fifty men who were mounted on the strongest of the captured ponies. He arrived at Crook City without accident or detention, and on the 13th started supplies to meet the command.

The march of the 12th of September — a day never to be forgotten — from Owl Creek to Crook City, is known as "the mud march," during which scores of horses were abandoned, and starving and exhausted men despairingly gave up and were with the utmost difficulty persuaded to proceed. It was not until after midnight that the rear guard (Company I) arrived at the bivouac on Crow creek. On the morning of the 12th, Major Upham, several officers, and one hundred and fifty men of the regiment were detached, with two ponies for rations, to examine the country east of the command. They rejoined on the

Belle Fourche on the 14th, having lost one man killed by the enemies.

On the 13th of September, the weary and well-nigh exhausted command forded the Belle Fourche and encamped in a beautiful grove. Pluck had won the race against starvation, for over the Hills came a herd of beef-cattle, and a few minutes later, a number of supply wagons sent by the citizens of Deadwood, were seen approaching the camp. The command rested several days in Whitewood valley, where Crook City now stands, and Gen. Crook and command visited Deadwood. The officers were entertained by the citizens in the most hospitable manner. On September the 27th, Gen. Crook sent the following letter to Deadwood:—

“ HEADQUARTERS DEPARTMENT OF THE PLATTE, OMAHA, }
September the 27th, 1876. }

GENTLEMEN: At this the earliest moment I desire to acknowledge the courtesy of the resolution passed by your honorable body; inviting me to accept the hospitality of your city and likewise to express in behalf of myself and staff, a most grateful appreciation of kindness bestowed upon us while with you. To your Mayor, Hon. E. B. Farnum and Messrs. Kurtz, Philbrook and Dawson, for the thorough manner in which their duties as a committee were carried out, I desire to make known our feeling of lasting indebtedness.

Your obedient servant,

GEO. CROOK, Brigadier-General.

To the Mayor and Council of Deadwood.”

From Whitewood valley, Crook's command moved by easy marches to Custer City and encamped in that vicinity until the 14th of October, when the regiment, with detachments of the Second and Third Cavalry, aggregating about eight hundred officers and men under Colonel Merritt, made a reconnoissance down the south fork of the Cheyenne river to the mouth of Rapid creek, and then returned to the Custer City and Red Cloud road, near Buffalo-Gap,

and proceeded thence to Fort Niobrara, Neb., where the Big Horn and Yellowstone Expedition was disbanded on the 14th of October, and in a farewell address, Gen. Crook addressed himself to the officers and men as follows:—

“ In the campaign now closed I have been obliged to call upon you for much hard service and many sacrifices of personal comfort. At times you have been out of reach of your base of supplies in most inclement weather, and have marched without food or sleep -- without shelter. In your engagements you have evinced a high order of discipline and courage; in your marches wonderful powers of endurance; and in your deprivations and hardships, patience and fortitude.

“ Indian warfare is of all warfares the most dangerous, the most trying and the most thankless. Not recognized by the high authority of the United States Congress as war, it still possesses for you all the disadvantages of civilized warfare with all the horrible accompaniments that barbarism can invent and savages execute. In it you are required to serve without the incentive of promotion or recognition, in truth without favor or the hope of reward. The people of our sparsely settled frontier in whose defense you have labored have but little influence with the powerful communities in the East; their representatives have little voice in our national councils; while your savage foes are not only the wards of the Government and supported in idleness by the nation, but objects of sympathy with large numbers of people otherwise well-informed and discerning. You may therefore congratulate yourselves that in the performance of your military duty you have been on the side of the weak against the strong, and that the few people on the frontier will remember your efforts with gratitude.

“ GENERAL GEORGE CROOK.”

Indian depredations continued in the valleys along the foot-hills till February, 1877, when Major Vroom and a battalion of the Third Cavalry was ordered out from Fort

Robinson and afforded much security to settlers and materially assisted in bringing about the surrender, in April, of Crazy Horse and his entire following.

CHAPTER IV.

DEADWOOD.

A prettier town in a mountainous country, a more industrious and energetic community than that of Deadwood, after two years of existence, could hardly be found. Every thing seemed to indicate that the growth and prosperity of the place was an assured fact. The first great disaster befell the young community between the 25th and 26th of September, 1879, when the city was entirely destroyed by fire. The fire originated in the Empire bakery on Sherman street — Mrs. Ellsner, proprietress — that portion of the city being then well built up.

As in all new mining cities, many of the buildings were frame, and generally of inflammable yellow pine, among which the flames spread like wildfire on the prairie. Jensen & Bliss' hardware store, in the same block with the bakery, was speedily enveloped, and shortly thereafter occurred a terrific explosion of black powder, sending a perfect shower of sparks and burning timber over the city, igniting the Welch House, Lee street, and many other buildings, until in an incredible short space of time that entire portion of the city beginning at the court house, and extending north to Williams street and east to Chinatown, was one mass of flames. Explosion followed explosion, as stores of powder, oil and whisky were reached, terrorizing the populace, and expediting the work of destruction. Details are unnecessary.

The fire raged for three long hours, terminating only when food for the flames was exhausted. The people retreated to Forest Hill, where they sat and gazed upon the

destruction of their property, unable to do anything to arrest the progress of the flames, and thankful to escape with their lives. Ruin was complete. From Pine and Sherman streets to Forbes' fire-proof, Chinatown, an area nearly a half mile by a quarter mile, every building, brick or frame, with the exception of a few fire-proof store houses, was all consumed. Nearly 300 buildings of all kinds, and their contents were obliterated, and day-light dawned upon 2,000 houseless people perching, half-naked, upon the hill-sides, with heaps of ashes and cinders their sole possessions.

But they could not be crushed. Their dauntless will and energy could not be subdued, and before the ashes had cooled, the work of rebuilding began. Our business men lost not a moment of time brooding over losses, but hastened on horseback to the nearest telegraph office, and sent orders for new stocks by express, then hastened to the nearest saw mills and purchased lumber for new buildings. Within twenty-four hours after the dreadful holocaust there were a score of temporary buildings ready to occupy and at once business resumed. The foundations for four-story brick blocks were cleared and laid within forty-eight hours after the burning, and within ninety days thereafter the monuments of pluck and energy were occupied.

Telegrams from the Eastern wholesale houses came at once to each business man offering aid to the supposed sufferers and an abundance of goods to their customers. The former was promptly declined but the latter accepted, and as fast as the long line of teams of every transportation line could bring in the goods, millions of pounds of the necessities and luxuries of life poured in enough to satisfy all. A marked feature of this great calamity was the fact that the few merchants and business men who were fortunate enough to escape with their stocks, sold them at the prices formerly received, taking no undue advantage of the necessities of the people.

The neighboring cities of Lead and Central, also showed their magnanimity by throwing wide open their houses to the

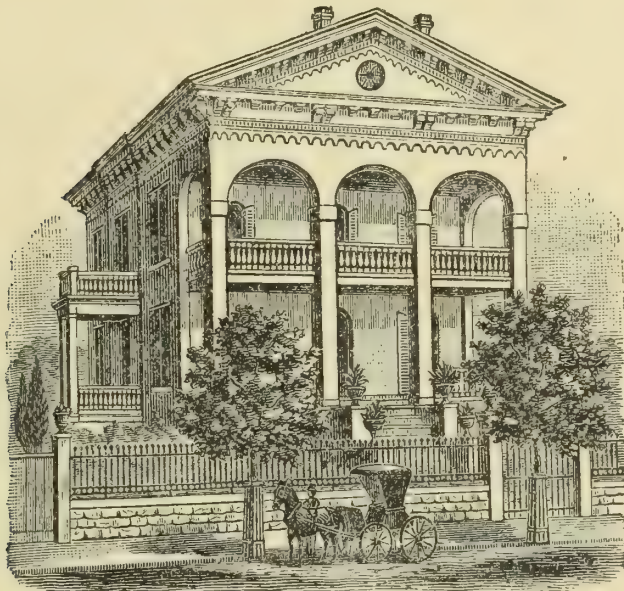
people until they could erect homes, and their wholesouled business men furnished them wares at usual rates. Was there ever a precedent in all history, where a city 200 miles from the nearest railroad, with a population of 4,000 people, nearly destroyed in a few hours, that did not suffer for bread and raiment? The work of rebuilding on the whole area swept by the flames continued until the new Deadwood was tenfold more beautiful in appearance, and contained buildings and improvements permanent in their character, and many of them of material that will resist the spread if not the action of the flames.

In 1880 the town was incorporated as a city by the territorial legislature and divided into four wards; each ward sending two members to the common council. By this act the different hamlets, camps and villages clustering around Deadwood were united into one city: Montana City, Fountain City, Elisabethtown, Chinatown, Ingleside, Forest Hill, City Creek, South Deadwood and Cleveland, with Deadwood proper, formed the new community. In 1881 the city was formed into one educational district, and provision made for a board of education. Everything went on again auspiciously till May, 1893, when a still greater calamity occurred.

The snow of the winter and spring had accumulated in the gulches and the mountains to a very unusual depth. On Sunday, May 11th, a heavy snowstorm commenced and soon turned into a warm rain, steadily falling through the week. On Thursday the situation became alarming, as the reports from the up-gulch camps indicated the volume of water coming down. About 6 p. m. the Lee street bridge became clogged and the city authorities gave orders for the destruction of the Homestake hose house and other buildings in the immediate track of the waters. All night through the brave firemen and citizens fought hard to relieve the gorged condition of the artificial channel that had been made through the city. Others were busy removing furniture and valuables from the doomed houses. When it was too late it was seen that much valuable property had

been placed in the track of high water. The price of land and the great demand for building lots had encroached upon the natural water-courses until there was no possible outlet without great destruction.

The flood on the Whitewood did but little damage above or in Lead City. At the toll-gate the house was suddenly swept away, drowning G. W. Chandler and wife and Gustave Holthausen, who was stopping with them at the time. Near the St. Edwards Academy the waters leaped over the confines and carried away a number of residences, and then



A HOME IN THE PRESENT DEADWOOD.

rushed in torrents down the streets. The bulkhead that had been placed in front of the public buildings was not sufficient for the emergency so that the water early cut a way around the head of it, and with full force first struck the high school building and then the Methodist church, carrying away every vestige of both and sweeping the ground to bed-rock.

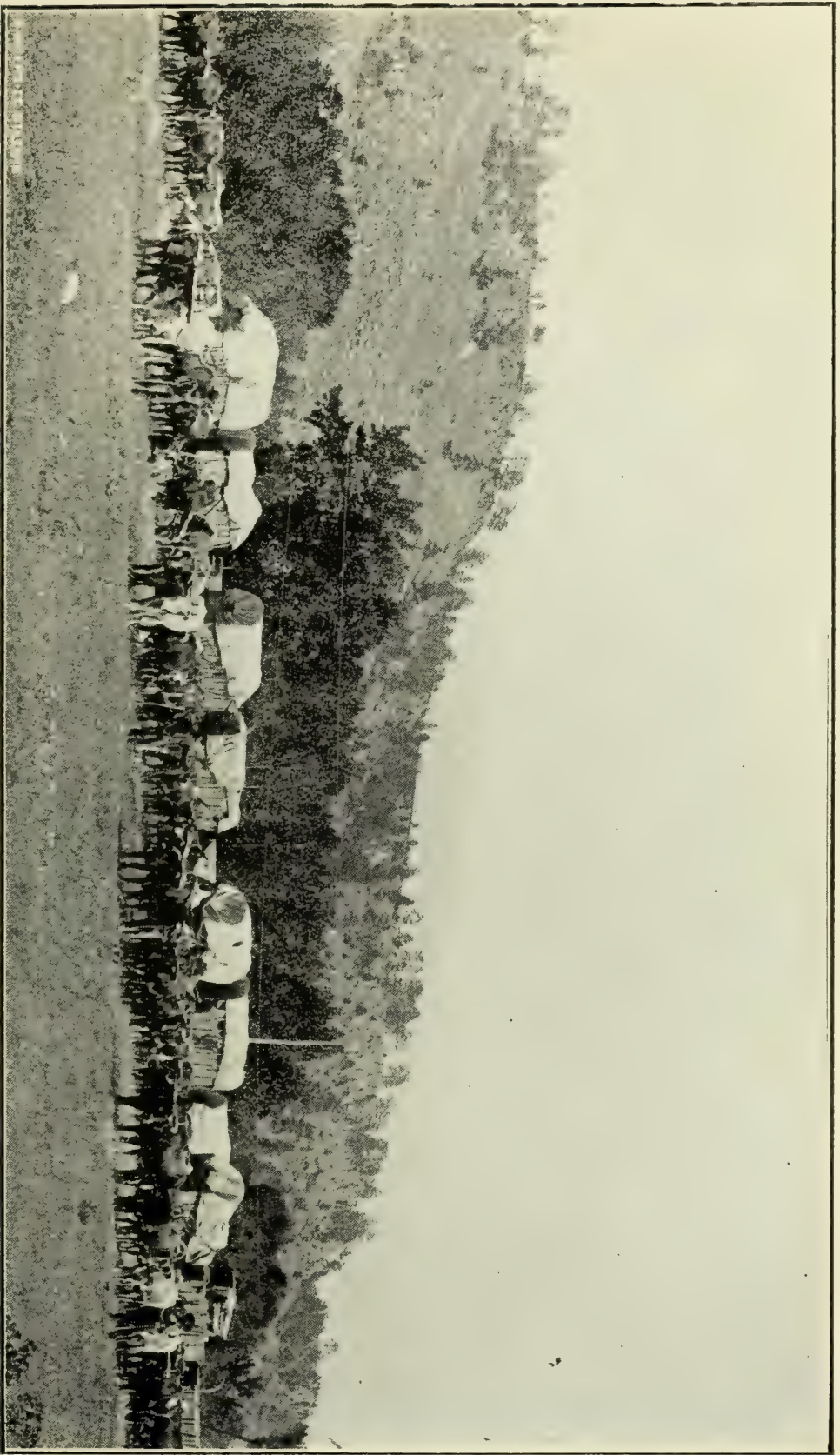
On lower Sherman, Deadwood, and Lee streets, the scenes were wild and thrilling, and even Main street was in utter confusion. The raging Deadwood creek coming down through Anchor, Golden Gate, Central, Blacktail and Gayville, carried on its angry bosom the loot from many an

elegantly furnished home. The bridges were all gone, the telegraph and telephone lines were all down. Hundreds of helpless people lined the bluffs on either side unable to communicate with each other. Many buildings, chiefly of an inferior class, were swept away. The rear walls of many of the substantial blocks on Main street were undermined but not destroyed.

Friday was indeed a wild day, and for a moment despair settled upon many hearts as the cry of fire rang out above the roar of the flood, and it was found that the block opposite the court-house was all ablaze. The water mains had been washed out. The heroic firemen were scattered by the impassable waters and fatigued by herculean labors, yet in an incredibly short time enough were on the spot to save the county buildings and confine the fire to the block in which it originated. The flood reached its height on Friday night and soon after receded.

The disaster was a terrible blow to Deadwood ; the people at first staggered under it, but with their accustomed determination they soon rallied and resolved to repair their ruined city, and make it better than before. Rebuilding began on a plan by which the streets were made wider and straighter. The public school building was put up on the finest site in the city, which the writer of this history then owned, and at its cost price turned over to the school board, the author preferring this rather than a higher price, which would willingly have been paid.

In September of the same year he established St. Edwards Academy on Cleveland avenue, in the building formerly used as an hospital. The Sisters of the Holy Cross, whose mother house is at St. Mary's, Notre Dame, Indiana, took charge of the new institution under supervision of Sister Mary of St. Sylvester, and have continued their good work ever since. Not only has the congregation of St. Ambrose at Deadwood benefited by the work of the Sisters, but the whole community has time and again testified to the great good their presence has done to Deadwood and the Black Hills.



“FREIGHTING” IN THE BLACK HILLS.

EARLY POSTAL AND TRANSPORTATION FACILITIES.

Previous to February 28, 1877, this being an unopened country, the postal authorities of the United States could not establish mail connection with Deadwood and the outside world; consequently settlers were left to their own resources; soon, however, a sufficient number of intrepid men were found to embark in the business of private mail-carriers. Mounted upon the fleetest of half-breed ponies and well armed, these men made trip after trip, first between Cheyenne and Deadwood and subsequently between Sidney and Deadwood, often in the almost incredible time of forty-eight hours, carrying hundreds and thousands of letters, without the loss of a single document, or interference by the Indians, who literally swarmed the intervening country. For this service they received twenty-five cents a letter, and so voluminous was the correspondence of the country that their revenue often amounted to a thousand dollars a trip. A post office was established at Deadwood in connection with the service, and although the access was given to everyone to search for himself among the great pile of letters, it was never heard that a letter or package was misappropriated.

The transportation of passengers and freight became an important business as soon as the rush for the Black Hills commenced. Mr. Fred T. Evans started the first freight train early in the spring of 1876 from Sioux City, Iowa, for the Hills, but the soldiers overhauled and captured his outfit and destroyed the property. In 1877, following the opening of the Hills to the whites, he commenced running a regular line by steamer from Sioux City to Pierre, and thence by wagon to the Hills. The boats were changed from Sioux City to Running Water in 1881, and in 1882, to Chamberlain, to connect with the Chicago, Milwaukee and St. Paul Railroad. Fred Evans Transportation Company employed about 400 wagons, 1,500 oxen, 250 mules and 175 men. This was a tedious ride. You would crawl up the Hills at the tail of strings of Conestoga wagons, loaded with

supplies. Frequently half a dozen of these wagons were strung together with chains. From six to twelve spans of mules or steers were attached to the leading wagon. The driver sat upon the back of a mule near the rear and cracked his bullwhip. The grade was heavy, and the train of overladen trucks moved very slow. Frequent stops were made, an attendant usually blocking the wheels.

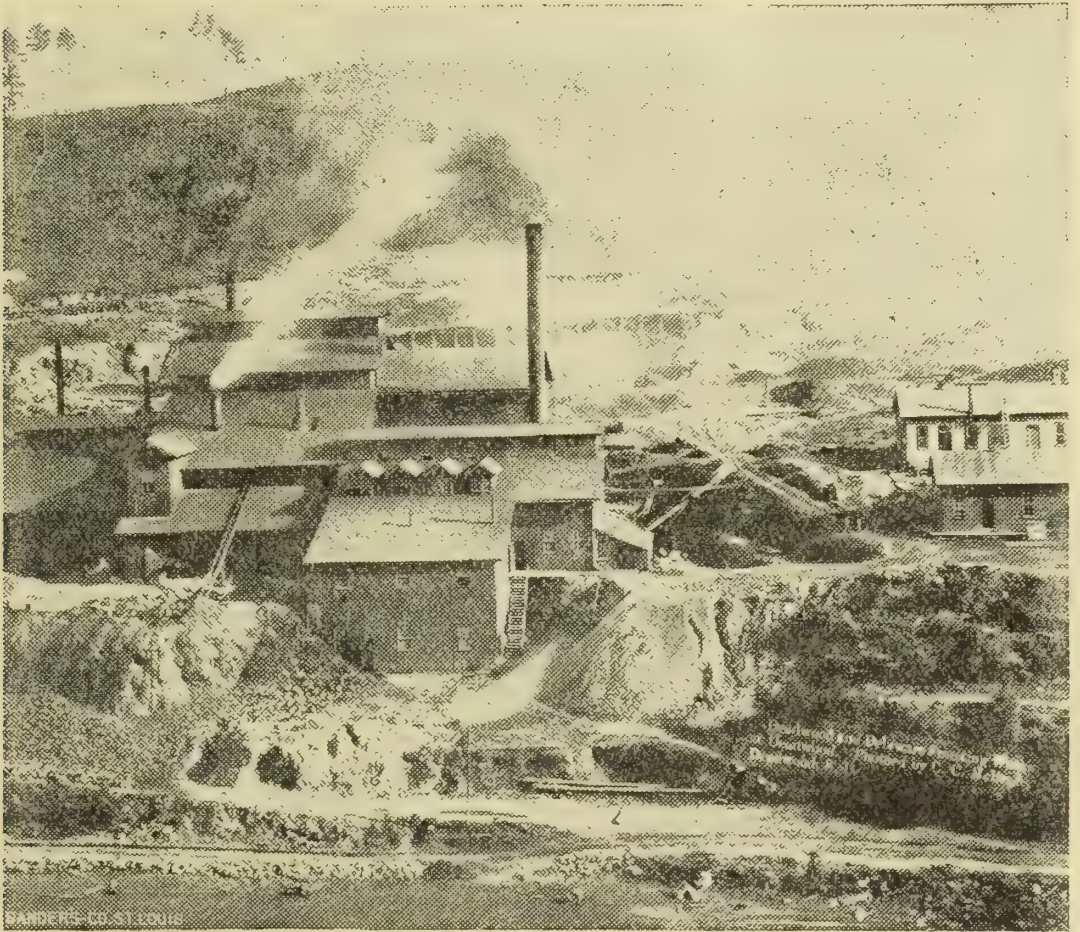
The Northwestern Express, Stage and Transportation Company, with headquarters at St. Paul, Minn., the successors to the old Minnesota Stage Company, commenced business with the Black Hills in March, 1877. The first line was put on from Bismark to connect with the Northern Pacific Railway, changing to Pierre in October, 1880, upon the completion of the Chicago and Northwestern Railway to that point. The stage line, now a thing of the past, had about twenty-four Concord four-horse coaches, running ten of them per week, each way between Pierre and Deadwood. The average number of passengers was about 5,000 a year. This line also transported all Eastern and Northern mail and the greater part of the gold and silver produce from the Hills.

Comfortable eating stations were erected along the line, where passengers for a reasonable charge could get a good meal; and the relay stations for horses were about fourteen miles apart. The transportation for heavy freight by this company included 1100 wagons, 600 mules, about 1600 oxen, and in all branches of their business about 500 men; 16,000,000 pounds of freight as an average a year were hauled by this company.

An express and passenger line was also run from Cheyenne to Deadwood, but afterwards changed to Sidney, Nebraska. All Western and Southern, and a great part of the Eastern mail and express passed through their hands. The company had its eating and relay stations about twelve miles apart. Their annual business amounted to about 40,000,000 pounds of freight and express.

The two stage routes, the one from Pierre, the other from Sidney to Deadwood, furnished an unlimited amount

of material for the romancer. Hardly a day passed in early days without the report that the stage had been robbed. It was especially the outgoing treasury coach with the gold-bullion from the mines, for which the "agents" laid in wait. The bullion at first was carried in a safe made of chilled steel, but after repeated robberies the



SMELTING WORKS AT DEADWOOD.

celebrated "Deadwood Coach" was made for this purpose. This was a formidable affair. A regular heavy six-horse coach, lined all over with steel and looking almost like a man-of-war on wheels.

Armed guards accompanied these coaches for a time on horseback, but afterwards they took their place on the inside of the coach, having the box with the bullion in their midst. These messengers or guardsmen, were persons of great courage, as shown from the fact that they risked their

lives continually. Numerous murders were committed for the sake of robbery, and many death blows dealt out in self-defense.

The "Deadwood Coach" has made, since it was taken off the road, the round about the world in the "Show of the Wild West" under Buffalo Bill.

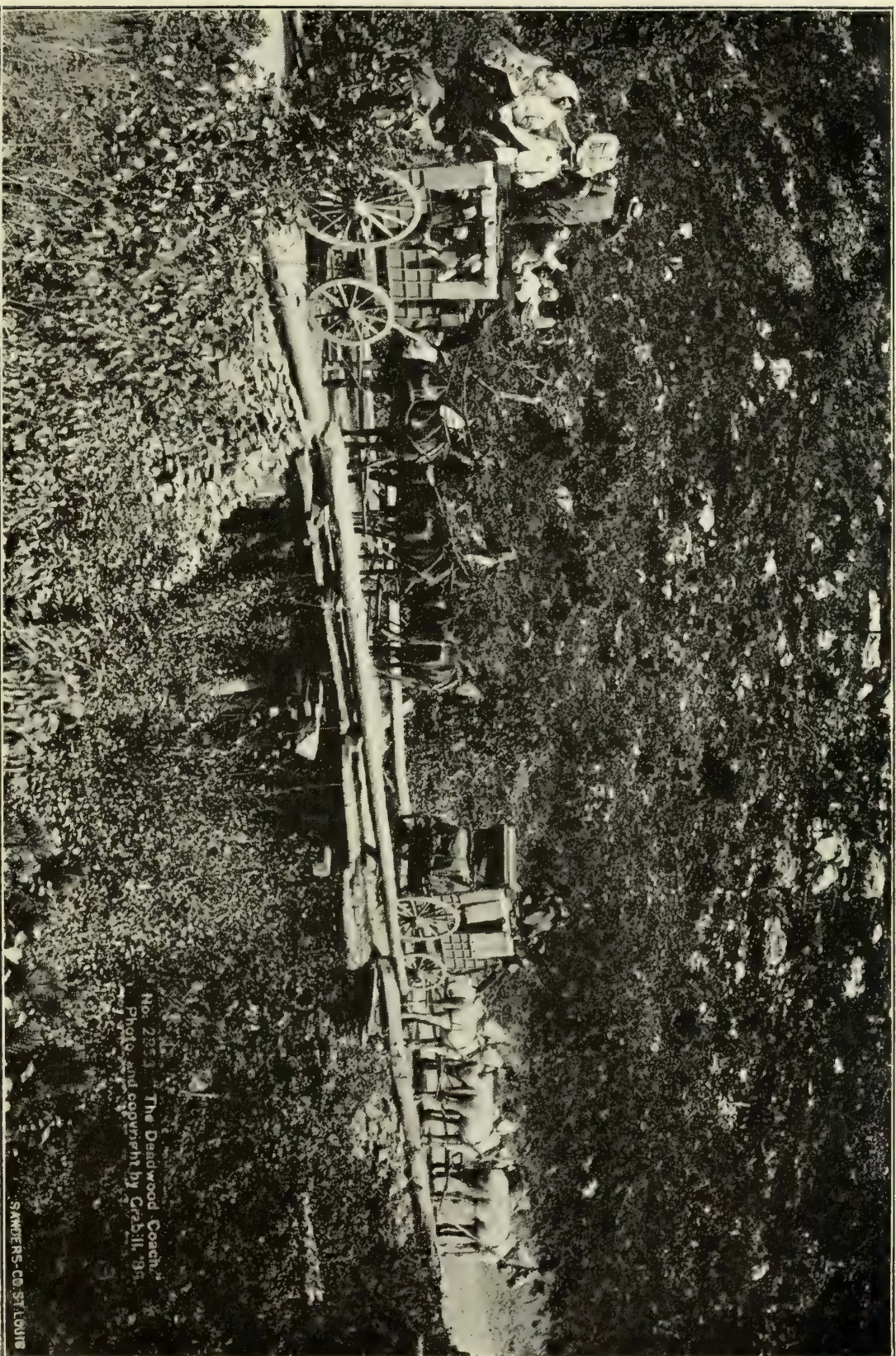
DEADWOOD OF TO-DAY.

Of the Deadwood of to-day, George T. Williams says in the *Deadwood Daily Pioneer* of Sunday, July 7, 1895:—

"A city of 5,000 people stands where twenty years ago not a white human resided. In no city of its size in the world is the amount of business annually transacted as in Deadwood. Groceries, dry goods, clothing, hardware, hotels and restaurants, two banks, jewelry stores, bakeries, cigar stores and manufactories, flouring mills, theaters, four newspapers, harness stores, livery stables, express companies, smelters and reduction works, wholesale liquor stores, stationery stores, drug stores, planing mills, lumber yards, sash and door manufactories, iron foundries, brick yards, boot and shoe stores, tailoring establishments, assaying and sampling offices, wagon factories, three railroads, and an electric light plant; all these represent some of the principal business interests of the city.

"Situated as Deadwood is, in the heart of the greatest mineral region of the world, proudly bearing the title of 'Metropolis of the Hills,' draining the trade as the watershed of every one of the important mining camps of the Hills, it is to the development of the mining resources of the Hills, that the city must look for future prosperity. Certain gigantic preparations looking to that end, due entirely to the energy of Deadwood's citizens, are now moving to that end.

"The history of the growth of a town or city is always the written or unwritten history of its people. It always marks the measure of their thriftiness, of their success or their failures, of their pluck and their energy. Write us



No. 2851 "The Deadwood Coach."
Photo. and copyright by Crabill '95.

SAMWERS CO. ST. LOUIS

the history of the growth of a city and we will tell you the qualities of its people. There are many reasons why cities that have once been started never stop growing, chief among which are their favorable location and natural advantages. Another important factor in the growth of towns and cities, and we believe it to be the most important of all, is the energy and enterprise of men who are willing to aid public enterprise, men who are always ready to speak a good word for their town and tell of its advantages, men who are willing to invest their money in the town where they have made it. It is such men as these that make towns and cities. May we be delivered from the town where the citizens are willing to sit down and do nothing for its material advancement and growth, adopting the policy that the town will grow anyway, and they will reap their share of the profits. Also deliver us from that town that is filled with croakers — men who are doing nothing and produce nothing, but who are always ready to tell of hard times in their town and predict its failure. The height and ambition of the croaker is to counteract and undo what the more ambitious and enterprising ones are trying to accomplish. No town can suit them, nothing can please them.

“Deadwood is fortunate in having but few croakers and few selfish men within its limits. Its citizens are generous and liberal and believe in a bright future for the city. They are here to stay and see that it keeps place in the front ranks of the cities of the West.

“These features, together with its location in one of the richest mining countries on the face of the globe, are what have made Deadwood what she is to-day, and what will cause it to make greater strides in the years to come.”

The Fremont, Elkhorn and Missouri Valley Railroad, belonging to the Chicago and Northwestern Railroad system, and the Burlington Route, have for the last few years operated in the Black Hills, and their lines run to all the principal points therein.

CHAPTER V.

LAWRENCE COUNTY — TERRITORY OF LINCOLN.

Early in July, 1876, a petition was circulated among the miners in and around Deadwood to establish a county government and form the county of Lawrence. But as the title to the country was still vested in the Indians no legal steps could be taken to form any legitimate government. On February 28, 1877, the President of the United States signed the treaty by which the Indians ceded their rights to the Government. When thus the country was opened to settlement, affairs of political nature could be carried on legitimately. Lawrence County was soon thereafter formed and named in honor of Colonel John Lawrence. It was the intention to make Crook City the county seat, and the first meeting of the commissioners was held there; but they adjourned to Deadwood without transacting any public business. The first officers of the new county were: County Commissioners, Fred T. Evans, John Woolsmuth, A. W. Lavender; Probate Judge, C. E. Haurehan; Register of Deeds, James H. Hand; Treasurer, John Lawrence; Assessor, — James; Sheriff, Seth Bullock; Attorney, — Flannery; Coroner, Dr. Babcock; Superintendent of Public Instruction, C. H. McKinnis.

In July, 1876, previous to the opening of the country by the Government, and whilst the treaty with the Indians was being negotiated, petitions were circulated, at the same time with the one for organizing Lawrence County, suggesting that a new territory should be formed and called either "Eldorado" or Lincoln. The limits of the new territory were to be these: Beginning at the intersection of the 101st meridian; thence north of the line of said meridian to the 46th parallel; thence west on the 46th parallel to the 109th meridian; thence south on the 109th meridian to the 43d parallel; thence west to the place of beginning. This would embrace an area of about 100,000 square miles, compactly outlined, being a little greater in extent from east to west than from

north to south. The *Rapid City Journal*, speaking of the matter under date of February 3, 1877, says:—

“ The organization of a new territory giving us ‘ a habitation and a name ’ is more and more talked of in Washington. The bill is rolling and every helping hand used in the proper direction speeds it on its course and will ultimately lead to the fulfillment of our wishes. The following letter received by Judge Murphy speaks for itself:—

‘ WASHINGTON — U. S. SENATE CHAMBER, January 8, 1877.

‘ DEAR SIR: Your letter of the 15th ult., in regard to organizing a territory in the Black Hills country, is at hand. I will lay the matter before the Committee on Territories of the Senate, and do what I can to further the project. I can not say just now what the prospects are for such a bill passing the Congress.

Yours truly,

‘ J. P. JONES.

‘ To J. M. Murphy, Esq., Deadwood City, Black Hills Territory. ’ ”

The bill came before the Senate in February and read as follows: —

A Bill to establish the Territory of the Black Hills, and to provide for a temporary government thereof:

SEC. 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that all part of the territory of the United States described as follows: Commencing at a point where the 43d parallel of north latitude intersects with the 25th meridian of longitude west from the city of Washington; thence following a due westerly course along said 43d parallel to its intersection with the 30th meridian west from the city of Washington; thence north along said 30th meridian of longitude to its intersection of the Yellowstone river to the center of said channel; thence following the center of said channel to its intersection with the 47th parallel to the

western boundary line of Dakota Territory; thence due south along said boundary line to the 46th parallel on north latitude; thence due east along said 46th parallel to the 25th meridian of longitude west from the city of Washington; thence south along said 25th meridian to the place of beginning; Be, and the same is hereby organized into a temporary government — by the name of Lincoln Territory.

SEC. 2. That the said Territory of Lincoln, and the several officers thereof, shall be invested with all the rights, powers, and privileges, and be subject to all regulations, restrictions and provisions, contained in Chapter 1 of Title 23 of the Revised Statutes of the United States, except as is herein otherwise provided.

SEC. 3. That the legislative power and authority of said territory shall be vested in the governor, and legislative assembly. The legislative assembly shall consist of a Council and House of Representatives; the Council shall consist of nine members, which may be increased to 13 members, having the qualifications of voters in said territory.

SEC. 4. The House of Representatives shall consist of 13 members, which may be increased to 27 members, possessing the same qualifications as are herein prescribed for the members of the Council; provided that the right of voting and of holding office in said territory shall be exercised only by inhabitants thereof who are citizens of the United States.

SEC. 5. That a delegate to the House of Representatives of the United States to serve during such Congress of the United States be elected by the voters of said territory, qualified to elect members of the Legislative Assembly, who shall be entitled to all and the same rights and privileges as are exercised and enjoyed by the delegates from the several other territories in said House of Representatives,— provided, that no person shall be a delegate who shall not have attained to the age of 25 years, and have the other qualifications of a voter in said territory.

SEC. 6. That when the land in said territory shall be surveyed under the direction of the Government of the United States, preparatory to bringing the same into the market, Sections 16 and 36 in each township in said territory shall be and the same is hereby received for the purpose of being applied to schools in the State or States hereafter to be erected out of the same.

SEC. 7. That the President of the United States, by and with the consent of the Senate, shall be, and is hereby authorized to appoint a surveyor-general for the said territory, who shall locate his office at such place as the Secretary of the Interior shall from time to time direct and whose duties, powers, obligations, responsibilities, compensations, and allowances for clerk hire, office rent, fuel and incidental expenses shall be the same as those of the Territory of Dakota under the direction of the Secretary of the Interior, and under instructions as he may deem advisable from time to time to give.

Early in February Senator Spencer made a speech in favor of the bill, and much was done both at Washington and in the newly-to-be-created territory, but in spite of all efforts the bill failed. Later when, in 1886-9, the question of admission and division of the territory of Dakota came before the people, the question of having a separate State for the Black Hills came up again, based on the facts that the interests of the rest of Dakota and those of the Black Hills were not identical.

CHAPTER VI.

LEAD (FORMERLY LEAD CITY).

Lead, the largest city west of the Missouri river, in South Dakota, began its history in the spring of 1876, when gold was discovered in the surrounding hills and gulches.

At this time the Black Hills was an unbroken forest. The immense lead now known as the Homestake property, was then unknown and covered with heavy timber. At first a few miners' cabins were built along Gold Run Gulch, and the occupants were engaged in placer mining. The first gold was discovered in Gold Run Gulch, a short distance below what is now known as the Homestake settling dam, in March, 1876, known among miners as "Discovery Claim." All the placer claims in the different gulches were rapidly taken up. Some of the claims produced an abundance of gold while others were poor.

Soon after prospecting for quartz began, and the Emanuel Brothers, where the cut now is, discovered the Homestake Mine. Soon after they found the Old Abe; then followed the discovery of the Highland by M. Cavanaugh, and the Golden Star by Smoky Jones.

Little could be done with the ore until a mill was built, but some was reduced in an arastra in Pennington, by the Emanuel Brothers, being ore from the Homestake mines.

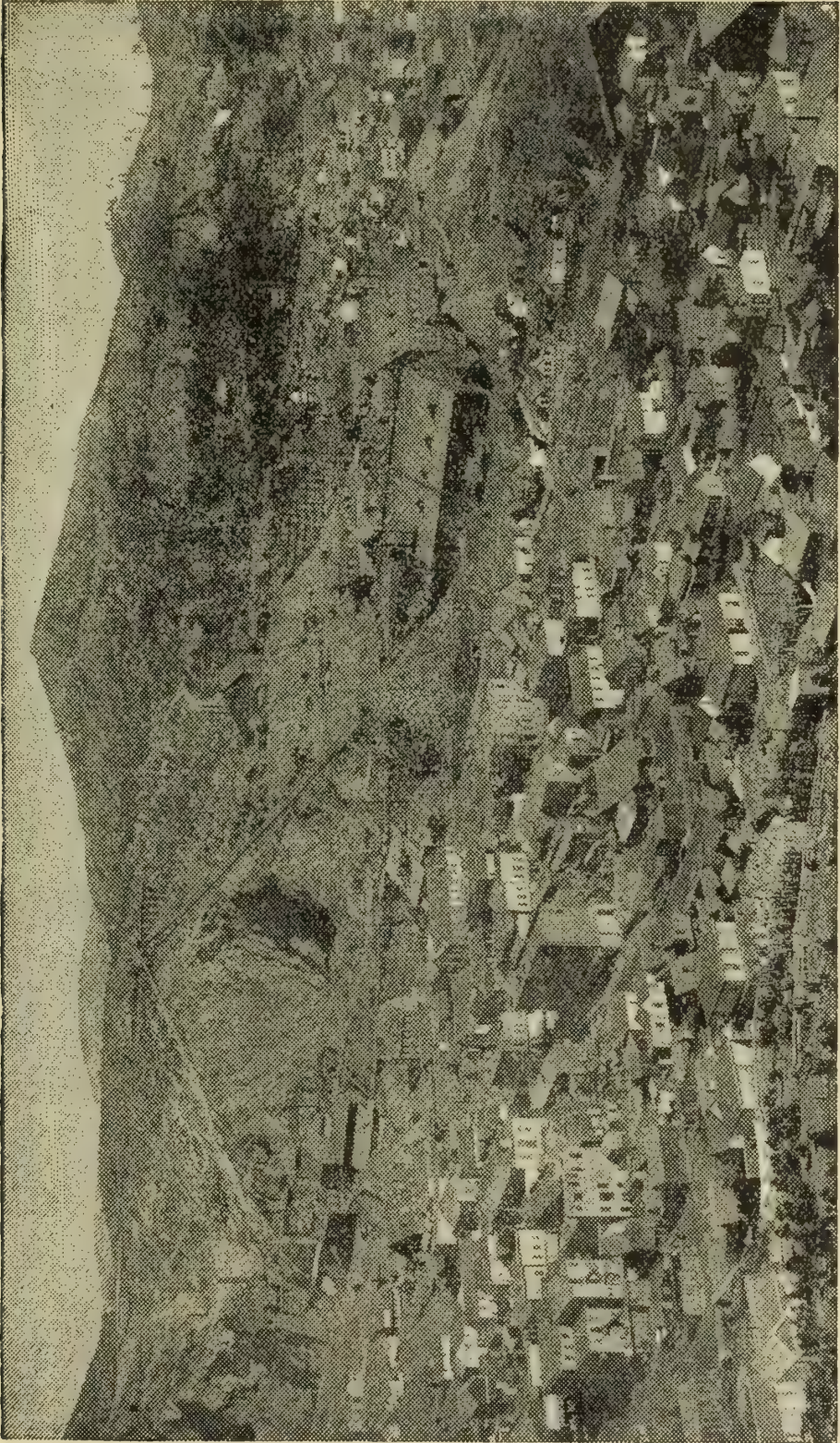
The spring of 1877 gave birth to the first quartz mill, one of twenty stamps, built by Messrs. George Beemer & Co., near where the D. C. depot now stands, and christened the "Racine," after the home of its proprietor. Stamps began dropping April 15, 1877.

The next was the Enos Mill, named after its proprietor. This was built in July, 1877. Mr. Enos, at that time, owned a one-fourth interest in the Homestake Mine.

Heretofore, there had been nothing but the scattered cabins of the prospecting miners, but in May and June, when the discovery of gold was made known to the world, the growth of the town was rapid. Four hotels were built — the Miner's, Springer, Abt's and Martin — and immigration began flocking in from all directions, continuing until the city has grown to be one of the finest in South Dakota.

Anton Webber had the first grocery store, which was located in Washington. Mr. Gushurst in the same year started a store in Washington, and when the town was

transferred, he moved to his present quarters. Mr. Gusturust also sold some valuable mining property.



LEAD.

The first frame building was built by Geo. Beemer & Company, which stands to-day as an old landmark, owned

and occupied by John Daily as a blacksmith shop, at the corner of Main and Mill streets; followed by Paul Jentzes' corner, where the first dance was held on the fourth of July, '77. It is said there were seven ladies in attendance, comprising the female population of that time. Wm. Fawcett was the first postmaster.

The Miners' Union was organized in 1877, with Pat O'Grady as its first president. Their magnificent hall was erected in 1876. The Opera House was built in 1878 by John Brooke. The Langrish Comedy Company gave the first performance in Lead.

The Catholics were first to erect a church, which was built in the spring of 1878, with the Rev. Father Mackin as pastor. It was followed by the Congregational, Methodist and Episcopal.

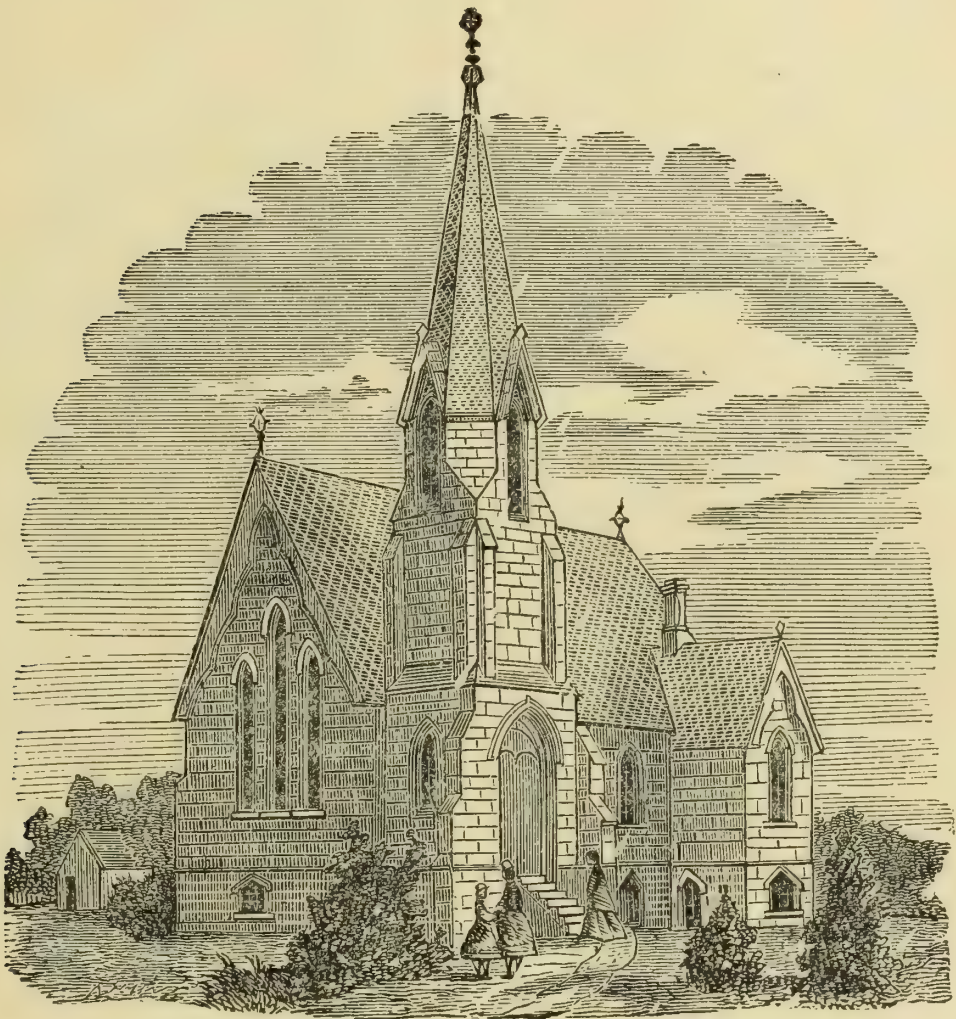
The first fire company was organized in 1878. Hose Company No. 1 was formed in 1879, and in 1888 No. 2 was added. The department was organized in 1889 with David Morgan chief. To-day the fire department stands without a peer in South Dakota.

The first brick building was the George Hearst, or more commonly called the "Brick Store," erected in 1880, followed by E. May's store, Dr. Lowie's drug store, Star Brewery Bank, and the magnificent Masonic and Odd Fellows hall.

The Homestake Consolidated Company is the most important mining corporation in the Hills. Its history in brief is this:—

In June, 1877, J. B. Haggin and Georg Hearst, prominent capitalists of California, having heard many encouraging reports from the Black Hills gold region, then becoming famous, determined to investigate the matter thoroughly, and to this end procured the service of L. D. Kellogg, an expert practical miner, who was sent to the Black Hills with instructions to examine thoroughly and carefully the gold-bearing region, and if found satisfactory to use his discretion in the purchase of desirable property.

Mr. Kellogg, after a brief investigation of the region around Deadwood, was so well pleased with the outlook that he bonded the Homestake and Deadwood Mines for \$45,000 and \$80,000 respectively; obtaining the refusal of them for a short time only. Returning immediately to California he reported to his employers, and the next morning, accompanied by Mr. Hearst, he started on his return for



A HOUSE OF WORSHIP IN LEAD OF TO-DAY.

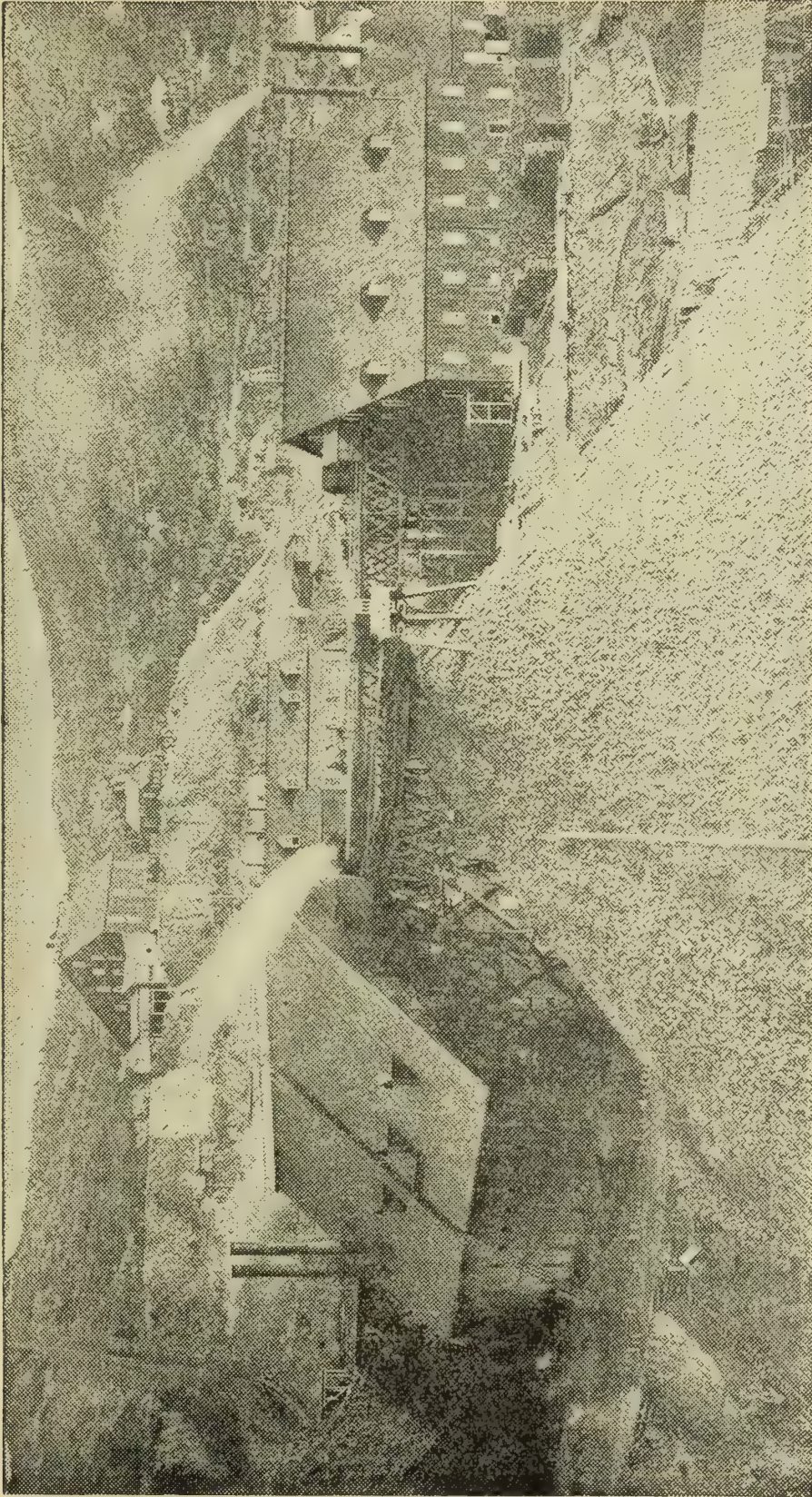
the Hills. Immediately on their arrival Mr. Hearst closed the bargain for the two mines, remarking that there was ore enough in sight to warrant the erection of an eighty stamp mill, even if there was no more ore in the Hills. Work on the mill was begun at once. The machinery was manufactured in San Francisco and shipped to Cheyenne, Wyoming, from which point it was transported by ox teams,

a distance of three hundred miles, to the mines, at an additional expense of \$30,000. The mill was completed and put in operation in August, 1878, at a cost of \$100,000.

From the beginning the business has increased to immense proportions. Gradually the company, or companies, have purchased additional mineral and timber lands, water-rights, etc., built railroads and erected enormous mills, the largest in the world, till at present they have over three millions invested, and are sending to the commercial world nearly four millions in gold annually. The original company absorbed others, and the Consolidated Homestake Company now includes the original Homestake, Highland, Deadwood, Terra and DeSmet companies. The number of workmen employed by the company in the mine is about 1,250, and on the railway and cutting timber about 500 more; so that not less than 1,750 men find direct employment from the company.

To organize such a vast industry, to bring water for the mills, to erect great buildings, and to supply them with the enormous machinery capable of crushing the millions of tons of rock hidden beneath the Hills, to sink the great shafts, to dig the long tunnels, to bring the immense quantities of timber to be used in the mines and for fuel, required a master mind, and this was found in Sam McMasters. To him belongs the greatest honor for the development of the Black Hills, for by his ability and energy, a great success was made of what might have been a failure had it been intrusted to weaker hands.

Lead is to day perhaps the most important city in South Dakota, as more money is earned there and more money gained from the mines than is in circulation in any city of both Dakotas. The growth of the city has been co-extensive with the increase in the work of the mines in and around Lead. The Bald-Mountain and Ruby-Basin mining districts, so close to Lead, and which of late years have attracted more attention than any other mining district in the Black Hills, owe their great development to the energy and pluck of the enterprising citizens of Lead.



MILL AND DUMP. — THE GREAT HOMESTAKE GOLD MINES, IN WHICH THERE IS A SHAFT RUNNING DOWN
700 FEET.

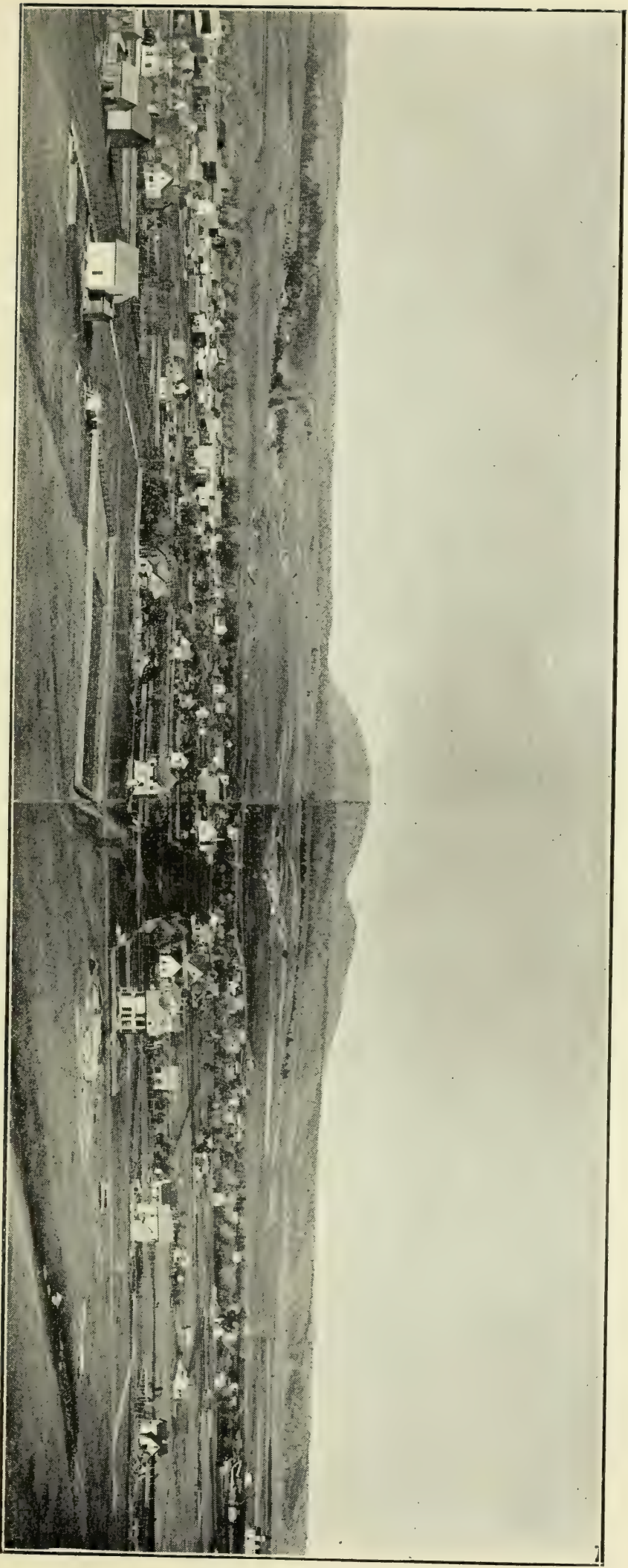
TERRAVILLE.

This town which dates back to 1877, is a mining town situated in a small gulch between Lead and Central. It is elevated a couple of hundred feet above Central, but is not as high as Lead. There are three large mills, the Deadwood, Terra and Caledonia. The population amount to about five hundred.

CENTRAL CITY.

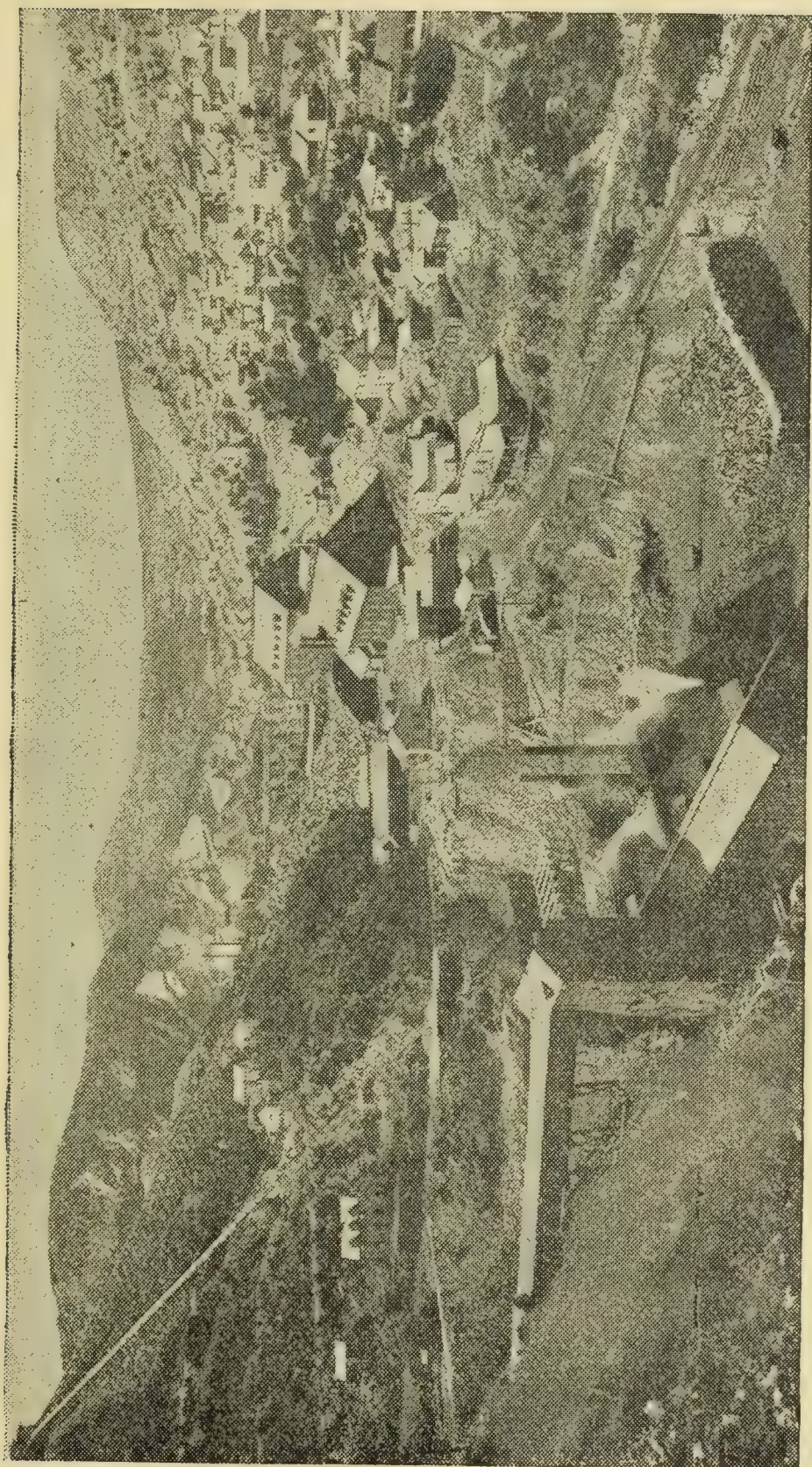
Located on Deadwood Creek, was at one time in the very heart of the gold-producing placer-grounds. It is located about two miles southwest from Deadwood, and made up of a half score of mining camps and towns, among which are the familiar names of Gayville (the oldest of the cluster), South Bend, Central City, Anchor City, Golden Gate, Poor Man's Gulch, Black Tail, Sheep Tail, and just outside of them the suggestive name given by the discouraged miner who left Poor Man's and seeing no further prospect or hope called the gulch "Go to Hell." Indeed the nomenclature of the mining claims tells often the feelings of the locator or his friendship for some hero, or his experience as a gold hunter. Thus we have the names of Desperado, Last Chance, Welcome, Devil's Dream, Wide-Awake, etc.; Grant, Lincoln, DeSmet, Minerva, Lexington, Uncle Sam, Charter Oak, Dakota Maid, Penobscott, Sitting Bull, etc.; or Two-Bit, Poor Man's, Rich, Oro Fino, Golden Summit, Gold Star, Noble Grand, Esmeralda, Ruby, etc.

The first cabins erected in Central are said to have been put up by William Lardner and E. McKay, in December, 1875. The earliest discoverers were Frank Bryant and John B. Pearson. A considerable town grew up before any steps were taken toward selecting a name for the place. On the 20th of January, 1877, a public meeting was held, at which William Lardner acted as chairman, and A. H. Loudon as secretary. George Williams was elected recorder. I. V. Skidmore, recently from Central City, Col-



SPEARFISH, SOUTH DAKOTA, 1895. LOOKING WEST.

A Pattequin, Artist.



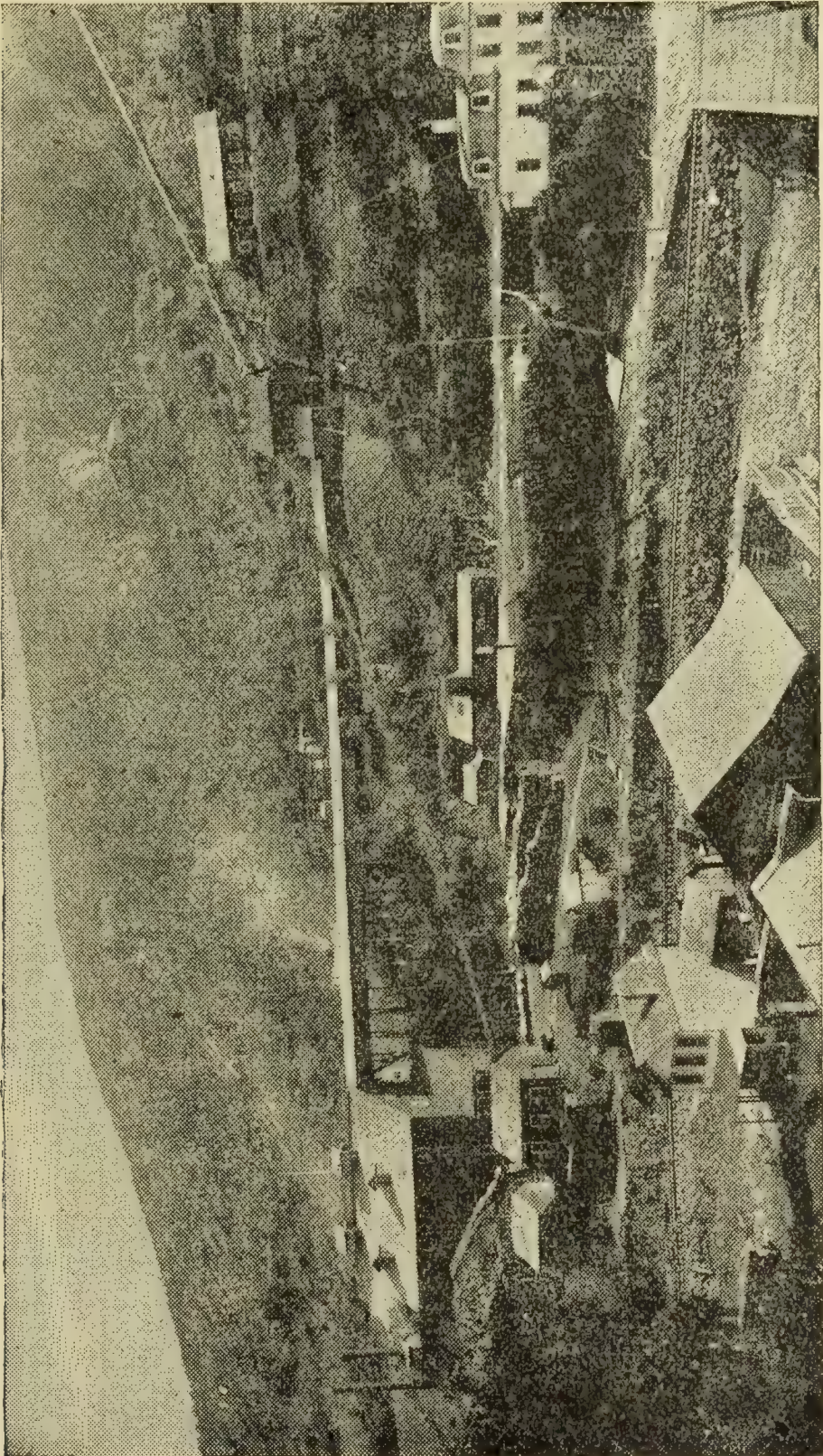
TERRAVILLE, S. DAKOTA.

orado, was allowed to christen the town after its Colorado namesake. Frank S. Bryant, Edward McKay and George Williams were appointed a committee to lay out the town.

The first public school in the Black Hills is said to have been opened in Central in the fall of 1877. The town was for a time the most prosperous in the Hills; but in proportion as other towns grew, especially Deadwood, Lead and Terraville, did it lose its importance and trade. The great flood of 1883 was terribly destructive to the cluster of hamlets comprising the city. In Anchor and Golden Gate the damage was heavy and the placer mines of the entire gulch were either swept away or buried, under heaps of rubbish, sand and gravel. Messrs. Allen and Thompson lost heavily, several hundred feet of their flume being either washed away or badly damaged, and the balance buried out of sight. A large number of buildings in Anchor and Golden Gate were carried away, and the roads in the gulch damaged to the extent of many thousand dollars. The damage was repaired and at the development of the Carbonate District and Bald Mountain Mines the town prospered and was in a fair way to regain its former mercantile importance. But it had to share the fate of Deadwood. On April the 25th, 1888, the town was almost completely destroyed by fire. Still the pluck and energy of the "old timers" showed itself anew and soon the town rose more beautiful and improved than before the disaster.

In the vicinity of Terry's Peak, Bald and Green Mountain a number of claims were staked and small mining camps grew up around the Portland, located on Squaw creek; the Welcome on the eastern base of Terry's Peak on the head of Fantail creek; the Ruby district which promises to equal any mining district as yet discovered in the Hills. The Carbonate camp was driving for a few years, at the working of the Iron Hill and other mines, and a flourishing camp gave evidence of the amount of work and other business transacted. Uncle Sam or Perry, as the post-office was called, and Brownsville, situated on Elk creek,

had early grown into a considerable camp, and several hundred men were employed by the Uncle Sam Mining



DESMET MILL AND MINES AT CENTRAL CITY.

Company and others who prospected for the precious mineral. South of the Uncle Sam, about twenty miles from

Deadwood, there existed during the years 1885 and 1886 a mining camp, with the name of Greenwood.

“Greengood” would have been a very appropriate appellation. The newspapers even of Chicago heralded the discovery of gold there as one of the greatest of the age. “Yes; one thousand stamps would drop within a year from date of discovery.” Hundreds of thousands of dollars were spent in building mill, dramway and flume. It is said that not a dollar’s more worth of gold was taken out of the rock and the amalgam than was put into the rock by “salting.” A fire finished the work; a Chicago capitalist was the wiser, but the mining business and prospects for miners received such a “black eye” that even at this date it will take years to regain its former standing. “Wildcat” schemes have indeed retarded the development of the mineral resources of the Black Hills, and especially of Lawrence County, more than most of our readers are aware of.

Southeast of Deadwood is the Two-Bit camp, so called because the first miners made only a quarter of a dollar a day whilst working the placer claims there. Farther on the route, we come to the Ore Fino, a little camp started in 1877, and which continued for a number of years, with an excellent prospect at the present day of reviving.

GALENA.

This place was first settled by prospectors, among the first being E. R. Collins, Esperando Feri, James Conzette, David Dusette, Wm. Ferguson, W. H. Wood, A. Finnegan, E. Ludlow, David Galvin and others. The town grew up and prospered with the arrival and success of Col. J. H. Davey, and returned to an almost death-like stillness when the operation of his mill and smelter ceased. The town is in a deep gulch with lofty mountains on all sides, covered with heavy timber. If the silver and other mines surrounding the camp are freed from litigation and developed, the camp will undoubtedly become the center of a rich silver-producing district.

Colonel J. H. Davey, for whom I always entertained a true, hearty friendship, came to the Hills in 1878, with a small sum of money in his pocket, but with plenty of energy and industry, and began mining and reducing ores on a small scale. For a considerable time he worked the Florence Mine and Mill under lease, and so successfully that in 1880, he purchased the property and began making improvements and adding constantly to his business abilities. He was ably seconded by his son Frank, who by strict attention soon became an expert in the knowledge of mining operations, and it was not long before he was considered one of the most reliable and experienced men in the Hills.

In 1881-1882 Colonel Davey erected extensive smelting works, and in 1883 rebuilt and enlarged the mill to one of twenty stamps, or three times its original capacity, making it one of the most complete establishments of its kind in America. The works were soon almost paid for, and every thing seemed to augur well for the well-deserving Colonel, when in the fall of the same year, as the work was in full blast, a lawsuit was commenced by the Richmond Company, an injunction obtained and further work stopped. The question at issue in the litigation involved the right of Colonel Davey to follow his ledge on the dip beyond his side lines.

For years the case was in the courts in Deadwood; then appealed to the Supreme Court of the then Territory of Dakota, and finally sent to the Supreme Court of the United States, where it is still pending. Whatever may be or have been the merits of the case the town of Galena and its industrious inhabitants have suffered most severely by the stern ruling of the court in the first instance. Had a receiver been appointed and the works continued operation under proper management, most undoubtedly the matter would have been peacefully settled for the benefit of all concerned. Colonel Davey having thus no further work to accomplish at Galena, went "West," and in the gold fields of Idaho endeavors to work with new energy and perseverance to reclaim from the earth the precious

metals hid there for the man who deserves well. May God's blessing protect him and his.

SPEARFISH CREEK.

The tradition of the Indians as to the origin of the name "Spearfish Creek" is this:—

There was once a little boy among the Sioux, remarkable for the smallness of his stature, living alone with his sister, who was older than himself. They were orphans and lived in a beautiful spot close to the Black Hills, on a beautiful river; and many large and picturesque rocks were scattered around their rural habitation. The boy was not only very small, but he never grew larger as he advanced in years. There had never been a dwarf before, among his people, and they looked upon him as a very insignificant being. Some thought him to be one of those little creatures whom they call Fairies of the Hills, who are seen to dance along over the ground, as light as the down of a thistle. But the most of them said: "Nay, we all know this little fellow; he eats and drinks like one of us, and we knew his father, they called him the boy-man." But the gods seeing him despised, had compassion on him, and determined to give him great power.

One day in winter he asked his sister to make him a ball to play with along the shores of the river and on the clear ice. She made one, but cautioned him not to go too far. Off he went in high glee, throwing his ball before him, and running after it in full speed; and he went as fast as his ball. At last it flew to a great distance; he followed it as quick as he could, and after running for some time, he saw four dark substances on the ice, straight before him. When he came up to the spot, he was surprised to see four tall men lying on the ice, spearing fish. The one nearest to him looked up, and he in turn was surprised to see such a diminutive being, and calling to his brother said: "Tia, look, see what a little fellow is here." After they had all looked a moment they resumed their position, and

covered their heads, intent on spearing fish. The boy thought to himself, these men are so large and tall that they treat me with contempt because I am of little stature, but I will teach them notwithstanding that I am not to be treated so lightly. After they were covered up, the boy saw that they had each a large trout lying beside them. He slyly took the one nearest to him, and placing his finger in the gills, and tossing his ball before him, ran off at full speed. When the man to whom the fish belonged looked up he saw his trout sliding away as if of itself at a great rate; the boy being so small he could not be distinguished from the fish. He addressed his brothers and said: "See how that tiny boy has stolen my fish; what a shame it is he should do so."

The boy reached home and told his sister to go out and bring in the fish he had brought. She exclaimed; "Where could you have got it, I hope you have not stolen it?"

"Oh, no," he replied, "I found it on the ice."

"How," persisted his sister "could you have got it there?"

"No matter," said the boy, "go and cook it." He disdained to answer her again, but thought he would one day teach her how to appreciate him. She went to the place where he said he had left the fish and there indeed she found a monstrous trout. She did as she was bid, and cooked it for that day's consumption.

Next morning he went off again, as at first, and when he came near the large men who fished every day, he threw his ball with such force that it rolled into the ice-hole of the man of whom he had stolen the fish the day before. As he happened to raise himself at the time, the boy said: "Friend, pray hand me my ball."

"No, indeed," answered the man, "I shall not;" and he thrust the ball under the ice.

The boy took hold of his arm, broke it in two in a moment, and threw him to one side. He then picked up his ball, which had bounded back from under the ice, and

tossed it as usual before him, outstripping its speed. He got home and remained within till the next morning.

The man whose arm had been broken hallooed out to his brothers, told them his case and deplored his fate. They ran to his assistance, and as loud as they could roar declared vengeance on the morrow, as they knew the boy's speed was too great for them to overtake him, and he was already almost out of sight. The boy heard their threats and awaited their coming with perfect indifference.

The four brothers the next morning prepared to take their revenge. Their old mother begged them not to go. "Better," said she, "that only one should suffer, than that all should perish; for he must be a wakun or he could not perform such feats." But her sons would not listen; and taking their wounded brother along, started for the boy's lodge, having learned that he lived at the place of rocks. The boy's sister thought she heard the noise of snowshoes on the crusted snow at a distance, advancing, and she then saw the tall men coming directly to their lodge, or rather cave, for they lived in a large rock. She ran in and told her brother the fact. He said: "Why do you mind them? give me something to eat." "How can you think of eating at such a time," she replied. "Do as I bid you," he continued, "and be quick." She then gave him his dish, which was a large turtle shell, and he commenced eating. Just then the men came to the door, and were about lifting the curtain placed there when the boy-man turned his dish upside down, and immediately the door was closed with a stone. The men tried hard to crack it with their clubs; and at length succeeded in making a slight opening, when one of them peeped in with one eye. The boy-man shot his arrow into his eye and brain, and he dropped down dead. The others, not knowing what had happened to their brother, did the same and all fell in like manner, for their curiosity being so great to see what the boy was about. After they were all killed the boy-man told his sister to go out and see them. She opened the

door, but fearing that they were not dead, turned back hastily and told her fears to her brother. He then went out and hacked them into small pieces, saying: "Henceforth let no man be larger than you are now." So men became of their present size.

When spring advanced the boy-man said to his sister: "Make me a new set of arrows and bows." She obeyed, as he never did anything himself that required manual labor, though he provided for their sustenance. After she made them she again cautioned him not to shoot into the stream. But regardless of all admonitions he on purpose shot his arrow into the water, and waded some distance till he got into deep water and paddled about for his arrow, so as to attract the attention of his sister. She came in haste to the shore, calling him to return. But instead of mind-ing her, he called out "Ma-mis-quan-ge-gun-a, be wan-wa-coos-zhe-shin;" that is: You-of-the-red-fins come and swallow me. Immediately that monster fish came and swallowed him; and seeing his sister standing on the shore in despair he hallooed out to her: "Me-zush-ke-zin-ance;" she wondered what it meant. On reflection she thought it must be an old moccasin. She accordingly tied the old moccasin to a string and fastened it to a tree near the water's edge. The fish said to the boy: "What is that floating there?" The boy-man said to the fish: "Go take hold of it and swallow it as fast as you can." The fish darted towards the old shoe, and swallowed it. The boy-man laughed to himself, but said nothing till the fish was fairly caught. He then took hold of the line, and began to pull himself and fish to the shore. The sister who was watching was surprised to see so large a fish; and hauling it ashore, she took her knife and commenced to cut it open, when, lo, she heard her brother's voice inside of the fish saying: "Make haste and release me from this nasty place." His sister was in such a haste that she almost hit his head with the knife, but succeeded in making an opening large enough for her brother to get out. When he was fairly released he told his sister to cut up the fish, and dry it, as it would last a long time

for their sustenance, and insisted that she should never doubt his ability in any way.

So ends the story which gave to the most beautiful creek in the Black Hills the name of Spearfish.

SPEARFISH.

The "Queen City" is situated on Spearfish creek on the western extremity of Central Park, 14 miles northwest from Deadwood, and near the foot of Crow Peak, the most conspicuous landmark in the northern Hills. The Crow Peak is a double peak and shows very conspicuous from Spearfish, from which it is distant about five miles in an air-line, in a direction southwest. Only one, the south peak, is composed of volcanic materials, the other being an uplift of sedimentary rock. The highest point rises, according to Newton's report, 6,000 feet, and about 1,500 feet above the surrounding country. The main peak is composed of a light gray, tough, compact rhyolite. The sedimentary rocks are greatly disturbed around its base, the carboniferous limestone lies at an angle of 75 to 80 degrees, and the underlying Potsdam sandstone stands vertical and at the contact is metamorphosed into a hard quartzite.

Joe's Peak, also called Spearfish Peak, rises to an altitude of five hundred feet above the valley and adds to the beauty of the landscape. Mount Lookout and Black Butte lend their luster to the scenery. Indeed the surroundings of Spearfish are among the most picturesque in this wonderful picturesque region, the valley being just wide enough to give the surrounding hills and mountains a magnificent setting.

It is claimed that James Butcher was the first actual settler at Spearfish. His cabin was located on the lots now occupied by the stores of J. C. Ryan. His first appearance was in the spring of 1876, a very dangerous time for settlers, who were harrassed and massacred by the savages almost daily. Mr. Butcher remained but a short time at Spearfish. John Jonstone, from Ames, Iowa, also settled about the same time with Butcher, in April, 1876, and

remained. An association of gentlemen formed themselves into a company to locate a town site somewhere in the Hills, and they located the town on the 14th of May, 1876. The company consisted of: W. W. Bradley, president of the company, from Louisville, Ky., his brothers T. K. Bradley, Nebraska City, Neb., and J. F. Bradley of Missouri; R. H. Evans, J. E. Smith, M. B. Goodel from Massachusetts; J. Powers, J. B. Blacke, Oliver Craig of St. Joseph, Mo.; Wm. Gay of Gayville, and others. The company took up 640 acres of land, intending to cover it with scrip, but found that such a course would make the cost above Government price. The town was surveyed, streets laid out and numbered regularly from 1 to 27, running north and south, and from A to Z, running east and west. The alleys were twenty feet wide. The company spent over three thousand dollars in surveying and constructing a water ditch, and several hundred dollars in surveying a wagon road to Bismark. A large and substantial stockade was also built as a protection against the Indians, who were very troublesome in 1876 and 1877.

A party of young men went out from Spearfish in July, 1877, and brought in a party of immigrants who were surrounded and held by the Indians on the Redwater, and they brought the remains of four others who had been killed and scalped not far from the town. On one occasion rumor was circulating at Deadwood that the whole colony at Spearfish had been massacred, and within a few hours over a hundred men turned out armed and well prepared for a desperate fray, left Deadwood and appeared at Spearfish eager for a fight. As the land taken up by the town company was not yet ceded by the Government, the company had trouble with squatters, who insisted that they had as much right to settle on the town site as the would-be proprietors. Litigation ensued between the company and those to whom they had sold lots and the squatter element, and the struggle continued in the courts for some time, until the company, getting tired and seeing nothing but continued

expense, threw up their plans, and abandoned the scheme altogether. The original company made two surveys of the town site, which was laid out to correspond as near as possible to the Government surveys. Lot owners also made a third survey, employing the county surveyor. The lands were subsequently patented.

The present town site covers twenty acres. The town organization was completed March 31, 1885, and a reorganization effected under the general law, June 4, 1888, as the "City of Spearfish." The city is divided into three wards, each represented in the council by two aldermen, the municipal government consisting of a mayor, treasurer, auditor, city marshal and common council.

The first merchant was J. C. Ryan, from St. Joseph, Mo., who erected a frame store building 20x40 feet, one story, in the fall of 1877, and opened a general stock of merchandise. The first tavern was a lunch room of logs erected by four herders, Pete Riley, Anton Gerring, Randolph Kelly, and J. Ryan in 1877. One of the party acted as cook and fed travelers. Later in the same year Riley, Gerring and Ryan built the first regular hotel on the ground now occupied by the Spearfish House, and kept it for a few months, when Riley bought out his partners and conducted it one winter, and sold to James Rogers. The first school was opened by Miss Pettigrew in a private house owned by John Ingersoll, in the fall of 1876. A flourishing academy was in operation for some time under the management of the Congregational Church but was discontinued.

A bill passed the Territorial Legislature at the session of 1880, locating a State Normal School at Spearfish; but by some failure of the committee appointed to attend to the matter of location, it went by default. Another bill was passed by the Legislature of 1882-83, the citizens gave forty acres of ground as a site, and the Legislature appropriated \$5,000 toward a building and \$2,000 for teachers' salary. In accord with the provisions of the charter, Governor Ordway appointed Joseph Ramsdell of Spearfish, R. D. Millett of Lead, C. T. P. Bass of Central, W. H. H.

Beadle, superintendent of Public Instruction, and the territorial treasurer as the Board of Trustees. The Board organized by the election of Joseph Ramsdell, president, and C. T. P. Bass, secretary. A site was chosen on the west side of Spearfish creek adjacent to the town and a contract entered into with George M. Johnson for the erection of a beautiful two-story building 30x45 feet. Work was commenced in July, 1883, and April 14, 1884, the school was opened with Mr. Van Baker, of Pennsylvania, as principal. Though, apparently on account of mismanagement upon the part of some one, or for some other reason not known, the prospect was not bright during the first few months of its existence, and the school was closed and only re-opened after the principal had resigned. Under the able management of the practical and experienced principal, Fayton L. Cook, and his able assistants, the Normal School at Spearfish is now (1890) second to none in the State of South Dakota. The teachers for the year are: Fayton L. Cook, principal; Margaret A. Thompson, Chestine Gowin, Martha M. Williams, Nona Culbertson, Myra E. Call, Ida M. Clemens, and E. F. Snell, May M. Clemens, Bertha Youmans as teachers of the model school. Carie Williams acts as librarian. The total enrollment is 371.

The growth of the city, co-extensive with the development of the resources of the magnificent valley extending to the Redwater on the north, was at first slow and indefinite, but agricultural experiments in 1877 establishing the value of the soil as well as of the limitless acres of grazing lands extending far into the theretofore unknown region lying north and west, also established the permanency of the town, the development of which from that period became rapid and substantial. The population is about 1,200 at present, with a thickly settled country necessarily tributary to the place.

The city has a large and profitable business of various kinds and being headquarters for many large live-stock enterprises, operating in instances 50 and 100 miles distant,

enjoys lucrative trade with that special class. The great waterpower of the Spearfish creek will at no distant day be utilized for mining purposes, and Spearfish will see within its limits a number of reduction works, gold-mills, chlorination works for silver ore, etc., the ore being produced in the carbonate district and from there all along the line to Crow Peak. No doubt new discoveries will be made on that line, not only of gold and silver but also of quicksilver, uranium and other minerals. The B. & M. R. Ry. extending their line to Spearfish will not only open the country for new developments but will also enable seekers of health and pleasure to enjoy the grand sceneries around Spearfish, which is destined to become one of the most beautiful places in the wonderful region of the Black Hills.

Bear Gulch was an early camp for placer-miners and of late years the discovery of large deposits of tin ore attracted attention to the place, which, if tin is found "in paying quantities" will develop into one of the richest camps of the northwestern hills and add to the industries of Spearfish, the nearest marketing-place.

WHITEWOOD

was laid out at the approach of Fremont, Elkhorn and Missouri Valley Railroad, and for some time was the "end of the track." The business necessarily connected with this fact made the town very prosperous for over two years. The place is distant from Deadwood 10 miles, from Sturgis 7 miles and 16 miles from Spearfish. The location of the town is most enchanting and no doubt it will in the course of time become the home of health-seekers and retired well-to-do people.

CROOK CITY.

As Whitewood is the youngest so Crook City is the oldest town in Lawrence County, or rather was, for the town has almost ceased to exist. It was originally called "Camp Crook" as Gen. Crook had encamped on its site for a considerable time in 1875. There was considerable excite-

ment and a large population here in 1876, when it was believed that the placers of Whitewood Creek were rich in float gold. The Indians were troublesome in 1876-77 and a number of people were killed around Crook, among whom were the Rev. Smith, a Methodist minister, three of the Wagon family, a Mr. McLaren and others to the number of from eight to ten, who were buried in the Crook City burying ground. The people were kept in constant fear, and alarms were of almost daily occurrence. The town of Crook was laid out in 1876 before there were any Government surveys in this region. Each settler present drew a lot and there was such a demand that they often changed hands at \$500 each. The creek bottom was considered valuable mining ground, and was staked into claims valued often as high as \$400. The town was considered so important that it was originally the intention to make it the county seat of Lawrence County, and the County Commissioners went there to hold their first meeting but adjourned to Deadwood. Recently Messrs. J. L. Denman and L. W. Valentine have pre-empted the town site, comprising about four hundred acres, and claim that the town is abandoned.

Other places of minor importance in Lawrence County are: —

Dumont, Elk Creek, Englewood, Nasby, Nemo, Saint Onge and Terry. St. Onge is a settlement of French-Canadians on the lower Falls-Bottom and now a station on the F. E. & M. V. R. Ry.

CHAPTER VII.

MEADE COUNTY.

About this, the youngest of the Black Hills counties, the author wrote for the Dakota *Catholic* in 1889 at the request of its editor for information about the country, the following: —

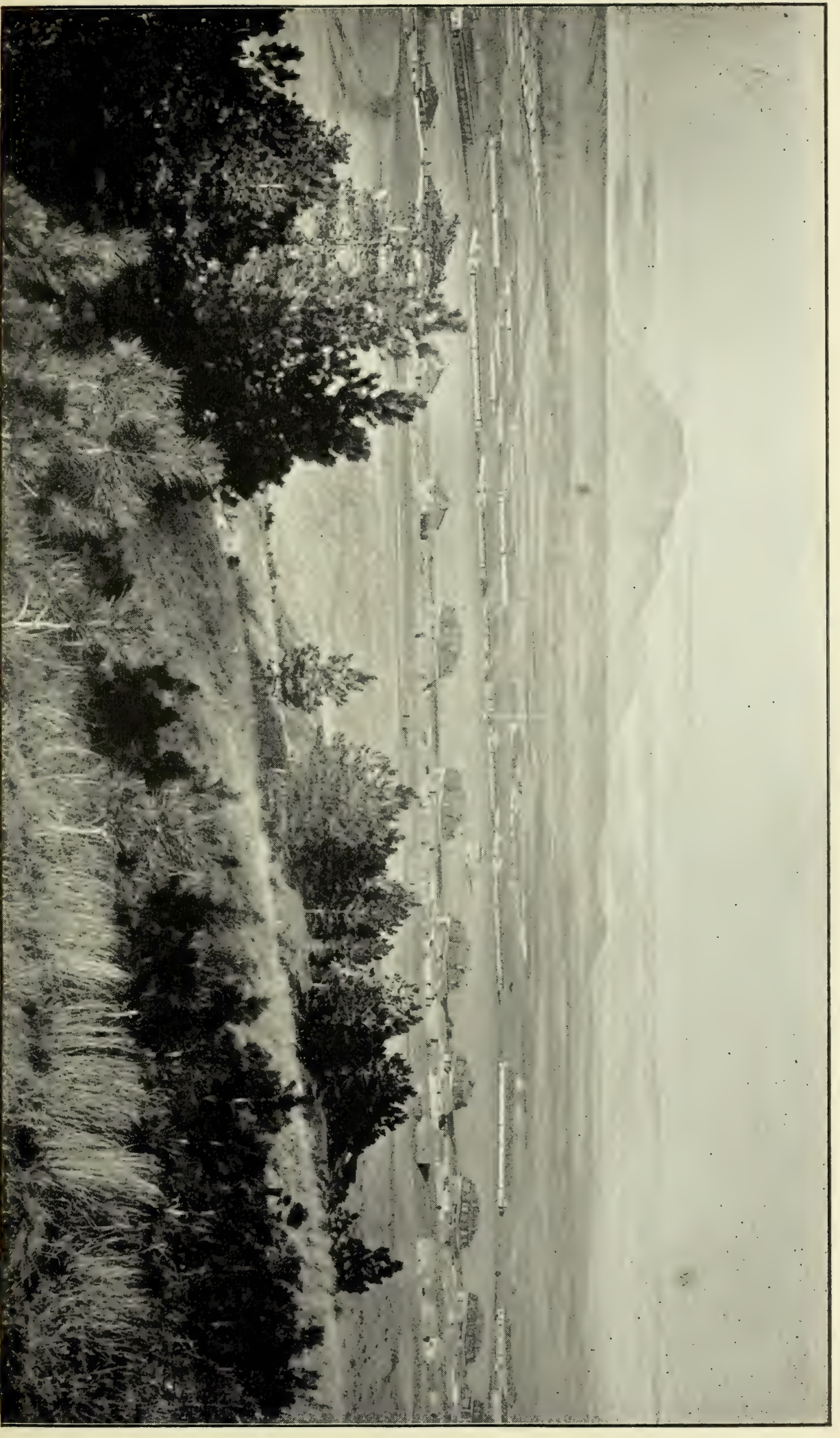
“ I herewith beg to submit to you a statement concerning the district embraced in my missions, containing such information as may be of advantage to people who desire to make a home here. Meade County embraces somewhat more than the eastern half of Lawrence County, from which it was separated during the present year. The average elevation above the level of the sea is from 2,000 to 3,500 feet, with the exception of a small portion in the south, which is considerably higher. The county is well watered. Springs are found in almost every ravine. Whitewood, Spring Creek, Nine Mile, Cottonwood, Bear Butte, Alkali, Pleasant Valley, Morris, Elk Creek and Box Elder are the names of the more important creeks.

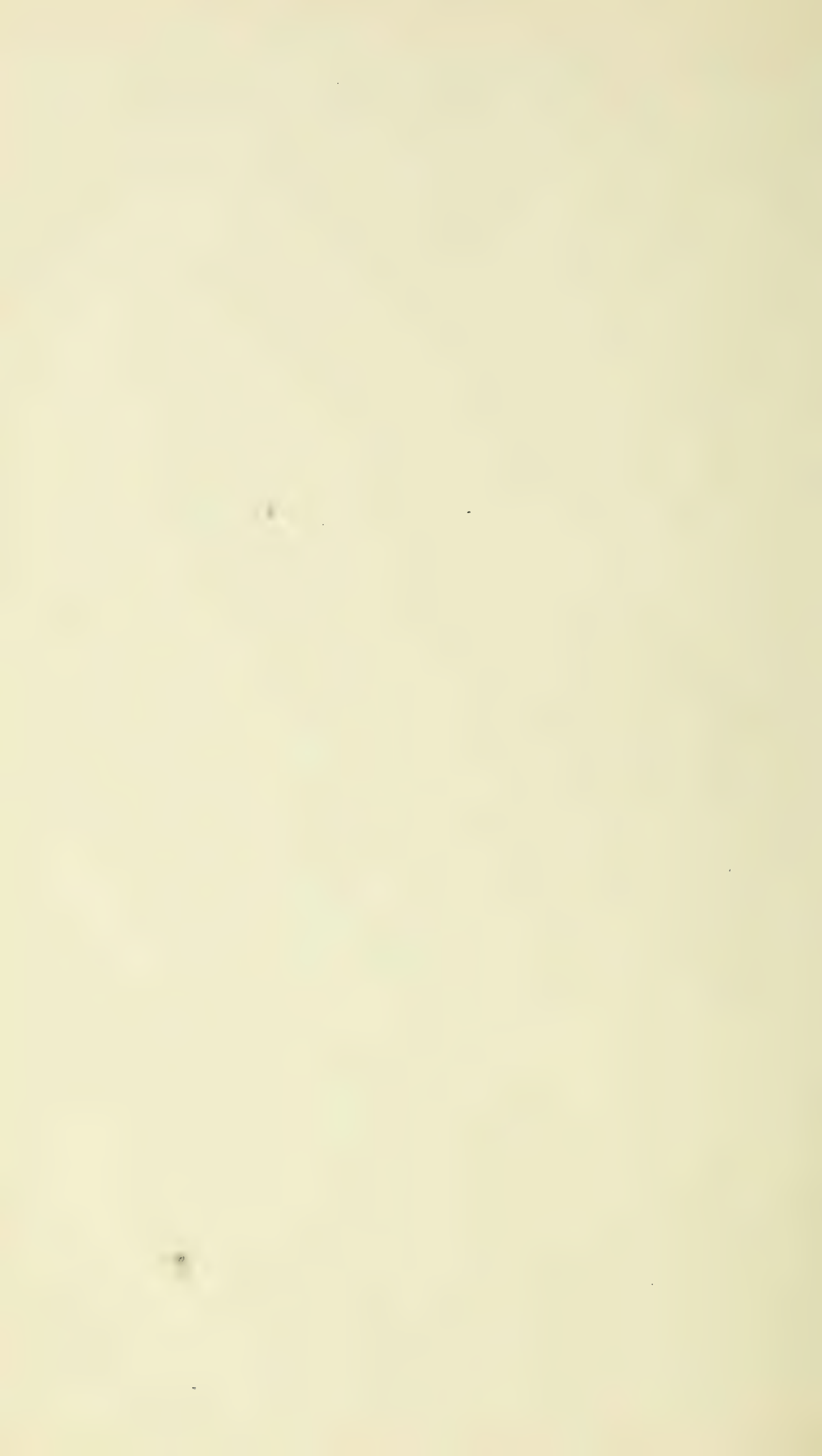
“ These creeks rise in numerous small springs issuing from the granite and metamorphic rocks, high up in the Hills, and the water is consequently remarkably pure and free from mineral and organic matter.

“ Those branches which head in the carboniferous limestone yield water for most domestic purposes, the only drawback being a slight “ hardness,” due to the presence of carbonate of lime, which does not in the least effect the health of those using it. In a few places along the foot-hills, where the gypsum or the alkali derived from the jurassic and cretaceous shales has contaminated the streams draining these formations, the water is found to be unfit for cooking purposes, though possessing purgative properties. To the stock-raiser or farmer this abundant supply of water is of the greatest importance. Wood for fuel and fencing purposes costs only the hauling and cutting at present.

“ The very name, Black Hills, the “ Pa-ha-sappa ” of the Indians, was given to this part of Dakota on account of the density of the forests clothing the hill-sides. Pine and spruce are the principal trees growing along the foot-hills. In the valleys, along the streams, white elm and box elder are found. The forests are at present unmercifully destroyed along the heads of certain creeks by one or two mining companies, but it is hoped and expected, that the

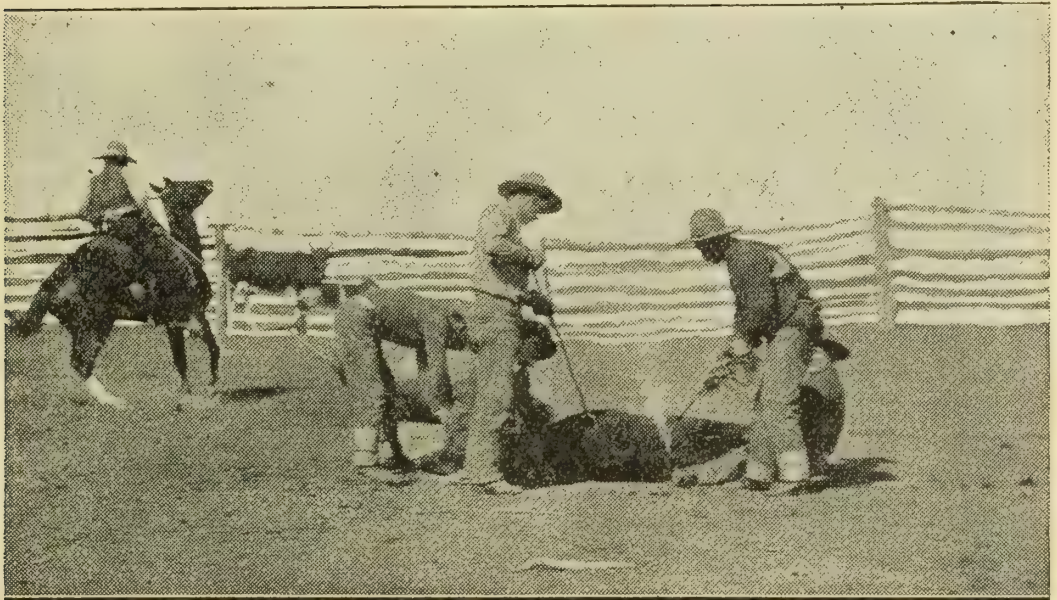
MEADE, SOUTH DAKOTA, BEAR BUTTE AND FORT MEADE IN THE DISTANCE.





State of South Dakota will see to it that these forests are protected for the benefit of the settlers to come. Building stone is also found in abundance, conveniently close to those who desire to build substantial homes.

“ Stock raising, on a very large scale, is not any longer practicable, as without doubt that part of the Sioux reservation which borders on the Cheyenne river will soon be thrown open to settlers. But a farmer can well raise from 100 to 250 head of cattle and keep them close near home, as on the divides between the different creeks grass is found



BRANDING CALVES ON "ROUND UP."

in abundance. The grasses growing here are almost endless in variety. The principal ones are: wild rye, crow's foot, cheat and wild oats, besides the gama or buffalo grass, which covers the greater part of the uncultivated country. This buffalo grass is the most nutritious wild grass growing in the Western country. Curing to hay on the ground, it retains all of its meat-producing qualities during the winter.

“ Butter sells to-day for 30 cents a pound and eggs 25 cents a dozen. A few experiments have been made in planting fruit trees and so far have been successful. Wheat, oats, corn, barley, rye, potatoes, as well as every variety of

garden vegetables, can be raised here, and they surpass in quality similar articles in the States. The military post at Fort Meade, where six troops of cavalry and four companies of infantry are stationed, as well as the proximity to the mineral belt, where in Lead and Galena, about 2,000 people are engaged in digging for the precious minerals, assure a good market for the farmer. Several of them cut hay for months during the summer and fall, to haul it to Fort Meade, where from \$5 to \$8 is paid per ton. The climate is very healthy."

The principal points in the country are: Sturgis, Fort Meade and Tilford, about each of which something must be said.

STURGIS

is located on Bear Butte creek, in Section 9, of Township 5 north, Range 5 east, eleven miles east by north in an air-line from Deadwood, and one and a half miles from Fort Meade. The site is a most magnificent one, lying like a park between the foot-hills and the higher portion of the hills proper. It is said that George Bosworth was the first actual settler on the site of Sturgis, in 1876. William Meyer settled in the same year three miles below Fort Meade on Bear Butte creek. W. Fletcher settled a little east of Fort Meade at the same time. W. McMillan settled between Fort Meade and Sturgis early in 1876. A military camp was temporarily located on Spring creek, north of Bear Butte, in the spring of 1876, and called Camp Sturgis in honor of Lt. Sturgis, who was killed in the Custer massacre. During the occupation of that camp the present site of Fort Meade was selected for a permanent military post. As soon as it was known where the post was to be located a company of gentlemen, among whom were J. C. Wilcox, J. M. Rodebank, Arthur Buckbee, M. Lazelle, B. G. Caulfield, J. Dudley and J. W. Caldwell, proceeded to select a site and lay out a town. Eighty acres were platted, and to this original town site many additions have been made. The town was covered with Valentine scrip on the

25th of October, 1878, and named Sturgis in honor of General Sturgis, the then commander of the forces at Fort Meade.

Considerable litigation grew out of the contending interest, the same as in the case of Spearfish, but the matter was finally settled in favor of the town company by the Secretary of the Interior. The place had a gradual growth up to the summer of 1883. The terrible destruction of property in Deadwood by the flood of that year caused an impression for a short time that Deadwood had received a shock from which it could scarcely recover, and on the strength of this idea Sturgis received a great impetus in all its business. The town doubled the number of its inhabitants within a year.

The early settlers experienced all the horrors of Indian depredation during the first two seasons of its existence. In 1877, Major Wilcox employed men to cut hay for him north of Bear Butte where he had located a temporary ranch. On one occasion the Indians made a raid, killed his cattle and two men and one woman, immigrants who had sought refuge on the ranch.

Sturgis had its first postoffice established in the winter of 1878-79, with Charles Collins as postmaster. Captain Harmon from Fort Lincoln opened the first store; Charles Elsener and John Scollard the first hotels in 1878.

STURGIS IN 1892.

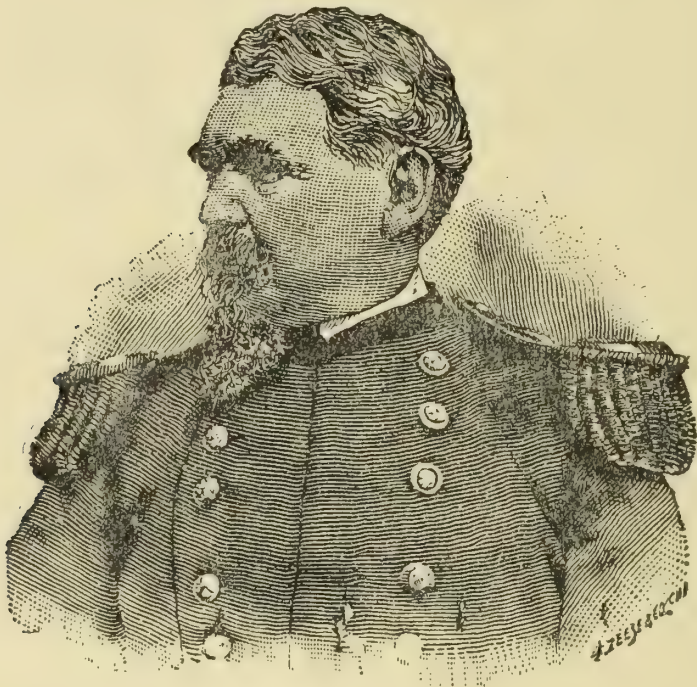
By request, Mr. C. C. Moody, of Sturgis, has forwarded the following in regard to the present condition of the place: —

“The Sturgis of to-day is vastly different from that of ten years ago. Then the business of the place was confined to one general store, when the management made, lost, “trusted out,” and wasted fortunes.

“Sturgis at this date, January 1, 1893, is a town of about two thousand inhabitants. The place is quite well known in the Black Hills as the most prosperous of all the

cities, and where the most money per capita is daily in circulation.

“It has one railroad. Western people have a habit of saying that one railroad is a detriment, but if this is the case it will not be so long as arrangements are being now completed for the extension of the Burlington and Missouri to this place, and before this work is in the hands of the reader the work no doubt will be completed.



Genl. Sturgis.

“On this day, too, the water is being turned into the ten-inch mains of the Sturgis waterworks system, a system that cost upward of \$80,000, and runs through its pipes the purest and best water on earth. There is a pressure of ninety-five pounds in the thirty hydrants of the city, and six streams can be thrown simultaneously one hundred feet into the air.

“Here is located the largest stucco mill in the West, the product from which has been sold in Omaha in vast quantities, and as far south as St. Louis, and as far east as Chicago, simply through the excellence of the product, due to the raw material. Gypsum exists in such quantities here that it is worth only the mining and delivery to

the works. The only creamery in the Black Hills is in Sturgis, built this fall at a cost of \$8,000.

“The new Benevolent Hall Association Temple is now completed. It is 50x120, with iron front, and the handsomest society hall to be found anywhere. This was built by four societies—the Masons, Odd Fellows, Knights of Pythias and United Workmen, at a cost of \$20,100.

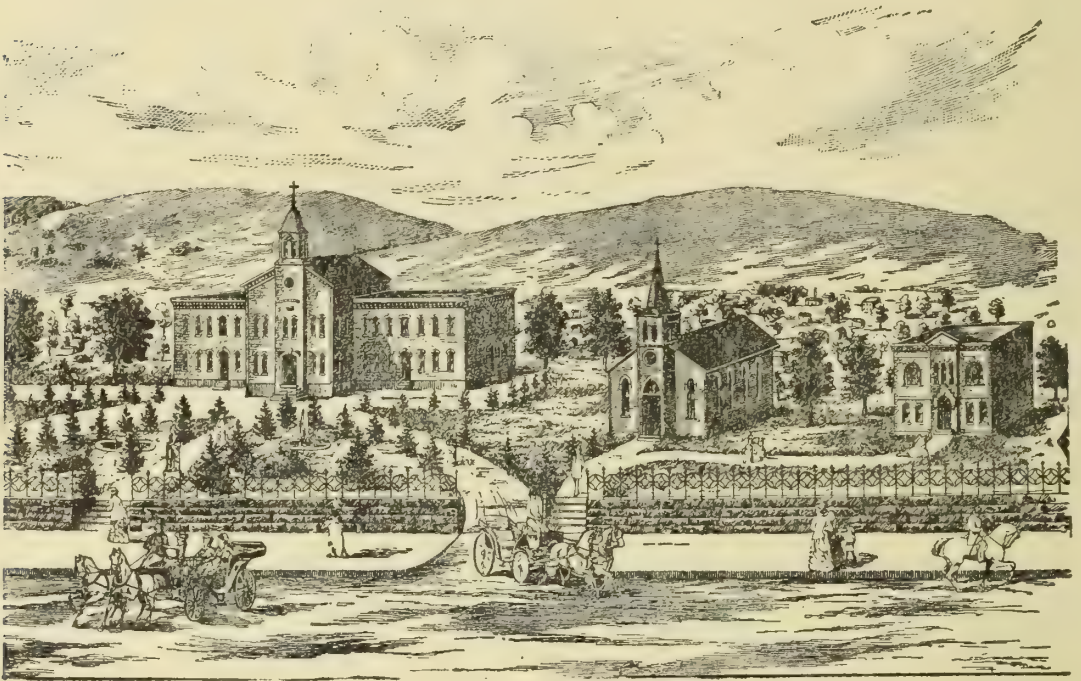
“In excavating for the waterwork system the streets of Sturgis presented almost insurmountable difficulties. These streets were macadamized several years ago, and the officials of the city built wiser than they knew. For a depth of about fourteen inches, the excavations were made with drill and bar. It was found that the macadam, which was made of broken rock and a gypsum or stucco mixture had “set” so hard that it was almost like solid rock, and where the pipe lines crossed the streets a tunnel was made four feet wide, over the tops of which loaded wagons crossed and recrossed without any suspicion that a small cave existed beneath. Sturgis has the best streets on earth.

“This is the county seat of Meade County. When Meade County was segregated from Lawrence County, Sturgis was chosen by popular vote. In consideration of this the city agreed to furnish a \$15,000 court-house, or place that much cash and collateral to the credit of Meade County to the erection of a court-house. Thereupon a company was formed, and one full block purchased on a commanding site, and deeded to the county. Since that time a certain sum has been set aside quarterly by the city toward the fund for court-house purposes, and the county has decided to build a \$30,000 court-house. Plans have been accepted, showing a magnificent building, built of cut stone from the Sturgis quarries,* and work on the base-

* This quarry was opened by Rev. Father Rosen, who discovered the stone and its qualities; used the same in the erection of St. Martin's Academy, and obtained from the proprietor, Mr. W. Ash, the privilege to have whatever stones may be needed for the Catholic church or school, free of charge.

ment excavation begins this year just as soon as the ground can be broken. It will take a year for completion.

“The schools of Sturgis are a source of pride and gratification to every citizen. The High School building is of four rooms, brick, heated by furnace, and with every convenience. It is an ornament to the city, as it stands upon the eminence where the new court-house is to be built. The Catholic, St. Martin’s Academy, established in 1888,



ST. MARTIN’S ACADEMY AND CHURCH GROUNDS.

by the Rev. P. Rosen, is the leading one in the State. It has pupils in attendance from Nebraska, Wyoming and Montana, besides a large number from all the towns in the Black Hills, and is famed far and wide for its excellence.

“In 1892 about \$125,000 was expended in the erection of private dwellings alone. Sturgis never had a case of contagious disease, the pure air and water making it impossible for diseases to gain a foothold.”

FORT MEADE.

This well-known military post is situated one and one-half miles east of Sturgis, the county seat of Meade

County, and was located by Lt.-General Sheridan, in August, 1876.

The first military camp was located near Bear Butte, two or three miles north of the present fort, and was called "Camp Sturgis," in honor of Lieutenant "Jack" Sturgis, killed at the Custer massacre. Fort Meade receives its name from General George C. Meade, the celebrated Union general who died at Philadelphia, in the year 1872, at an advanced age. The site is a most magnificent one, both from a scenic and strategic stand-point. On one side rises the foot-hills of the Black Hills covered with their dark pines, while on the other hand stretches away, toward the east, the beautiful rolling prairie. Bear Butte, just north of the post, rises straight from the level prairie to a height of 1,200 feet, and stands, like some grim and silent sentinel upon a lonely vigil, watching over the destiny of soldier and citizen alike.

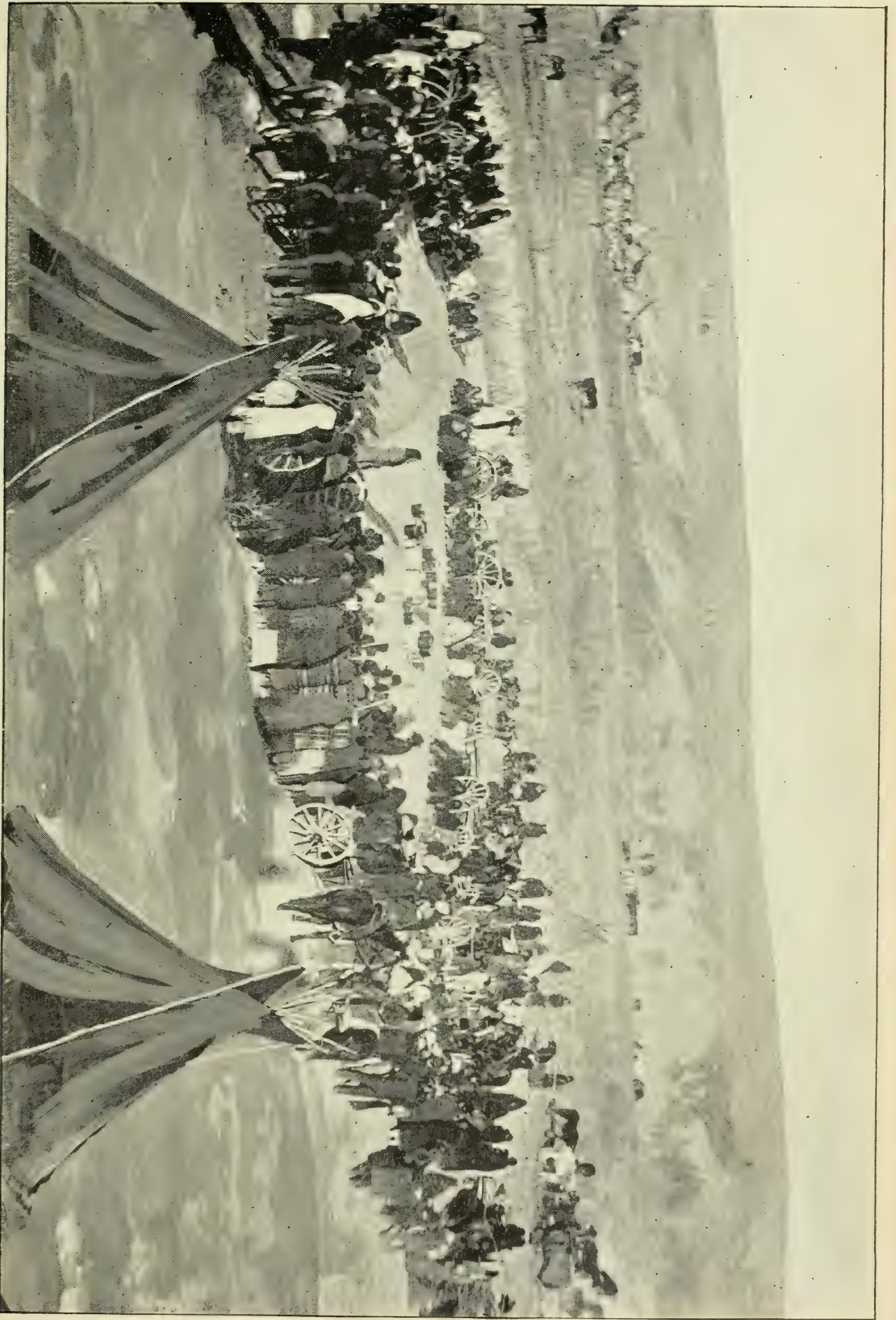
The buildings comprising the post are new and elegant, and from the lips of officers who have seen the majority of the military posts of this country, we have learned that Fort Meade is one of the most desirable locations in the entire war department. Fort Meade is a ten-company post, and at present is occupied by the Third Infantry and Eighth Cavalry. Colonel Elmer Otis, one of the oldest and best known officers in the regular army, is in command. It is expected that within the next two years there will be added to Fort Meade a school of instruction for officers, and also a thoroughly equipped cavalry school. The establishment of the former will greatly relieve Fort Leavenworth, the present school of instruction for the entire West, and both the schools together will greatly increase the number of men stationed here.

Fort Meade offers the greatest market in the entire Hills country. This post means much to the settlers of Meade County. The quantity of supplies required by the thousand men and their horses at Fort Meade is something enormous. All of these supplies are furnished by the farmers living in the country contiguous. An idea of the amount of mate-

rial used can be gathered by scrutinizing the following figures taken from the contracts of 1889: Hay, 2,500 tons; corn, 900,000 pounds; oats, 2,000,000 pounds; wood 7,000 cords, and other supplies in proportion. When it is remembered that Uncle Sam is a liberal buyer and willing to pay good, round prices for good weight and quality, and that he is a sure paymaster, it can readily be seen that the farmers of Meade County have grand opportunities open to them, opportunities which they are not slow to avail themselves of.

Fort Meade is the regimental headquarters of the Eighth Cavalry, and as a consequence, has the elegant band of the regiment, a musical organization having no superior in the employ of the government barring, perhaps, the Marine Band of Washington. Fort Meade is one of the most important posts in the Union, and will always be occupied as long as the Government desires to distribute troops throughout the North and Southwest, or keep close watch over the Indians on the various reservations.

Tilford is a small station on the F. E. & M. V. R. Ry. situated on the foot-hills on Morris creek and was destined once to be the connecting point for the Homestake Narrow Gauge Road, which, however, made the new town Piedmont, a few miles farther southeast, their starting point for shipping wood and freight to their works at Lead. In Bear Butte valley and along Spring creek, near the Butte, a large settlement was early begun by hardworking German farmers. The three brothers, Theodore, Hank and Mat Karrels were among the first settlers, and with energy and economy they have proved that farming around the Black Hills is remunerative in spite of all difficulties. They came from near Port Washington, Wisconsin, and a number of their friends followed them. On lower Bear Butte creek quite a number of emigrants from the Old Fatherland settled, and are adding to the wealth and prosperity of the country. On lower Elk creek a settlement of French-Canadians was begun early in 1877, but recent failures in the crop seem to discourage these settlers. Alkali, Bend,



NEAR FORT MEADE.

Big-Bottom, Black Hawk, Dalzell, Doyle, Elm Springs, Grashul, Hereford, Runkel, Smithville, Viewfield and Volunteer are the names of the other postoffices in Meade county.

CHAPTER VII.

PENNINGTON COUNTY.

Pennington County occupies a central position in the Black Hills, extending eighty miles in length east and west, by twenty north and south, and having an area of one thousand miles. The base line of the Hills survey on the forty-fourth parallel of north latitude, passes through the center of the county, which extends ten miles on each side of the line. The county is about equally divided between mountains and open country, the western portion extending into the hearts of the Hills, and the eastern including the main valleys and plains.

One-third of the great granite region of the Hills is within the limits of Pennington County, including Harney Peak, the loftiest summit in the Black Hills. This mountain is situated twenty-three miles in an air-line southwest of Rapid City, and can be plainly seen from the foot-hills northwest and southwest of the city, lifting its gigantic northern face far above the surrounding summits, standing among the granite towers and battlements, flanking the great mass like the dome of a mighty cathedral half in ruins, but magnificent still. To the northwest of Harney the horizon is pierced by innumerable peaks and ridges with many beautiful valleys intervening, through which the clear, swift streams go rattling toward the foot-hills and the wide spreading plains beyond. The whole western part of the county is heavily timbered, principally with hard pine, with some spruce, balsam fir, birch, oak, aspen and willows interspersed here and there. In places are found open prairie lands elevated from 4,500 to 6,000 feet above the

sea, like the one lying east of Rockerville and another at the head of Prairie creek, near the center of the county.

Some of the wildest scenery of the Hills is found in this county, especially on the slopes of the Harney range, and in the canyons of Rapid, Castle, Battle and Spring creek. The north face of Harney lifts its magnificent battlement



ENGLISH TOURISTS IN THE HILLS.

with a five miles sweep 3,000 feet above the valley at its base, and there are lofty cones about Rockerville, and between Hill City and Castleton, in the central portions of the county.

A belt of country six miles wide, running diagonally from Harney City to Rochfort, includes the bulk of the gold, silver, copper and tin mines in the county, the principal exceptions being the placer gold mines at Rochford. A line drawn north and south through Rapid City very

nearly divides the hilly from the level or plains region, and all lying east of it is a treeless, open prairie region, more or less cut down and eroded by the action of ice and water. The valleys of the lower Box Elder, Rapid and Spring creeks are broad and fertile, and here and there along the south branch of the Cheyenne river are located many of the great cattle ranches for which the Black Hills are so famous. Of late years the country is settling up with farmers and the cattle men have to leave. The principal streams of the county are Box Elder, Rapid, Spring and Battle creek.

The county was organized and its boundaries defined under an act of the Territorial Legislature, approved February 17, 1877, eleven days before the Hills were declared open to settlers. The act provided that the Governor should appoint the first county officers, and the following were duly appointed: County Commissioners, R. H. Vosburg, M. M. Fuller, Edwin Loveland (Mr. Loveland did not arrive in the Hills in time to qualify, and the office was declared vacant, and on May 9th, S. H. Coats was appointed in his stead); Probate Judge, E. C. Peters; Register of Deeds, J. R. Hanson; Sheriff, F. P. Moulton, Superintendent of Public Instruction, J. R. Brennan; Clerk of Court, Leonard F. Bell; Treasurer, E. C. Peters; District Attorney, F. J. Washabaugh; Surveyor, S. H. Coats. In the session held on April 2d, Sheridan was made the county seat, but by a vote of the people in November, 1877, the county seat was moved to Rapid.

RAPID CITY.

The first record of this place begins February 26, 1876. On the 23d of the same month a party, including John R. Brennan, W. P. Martin, A. Brown, Martin Penzinger, William Marston, Thomas Ferguson, and Richard King left Palmer Gulch, north of Harney Peak, where they had been prospecting and engaged in placer mining, to look up a suitable location for laying out a town somewhere in the foot-hills. Traveling in a northeasterly course, they struck

Rapid creek and encamped that night at what is now known as the "Big" or "Mammoth Springs," at the mouth of the great canyon, where the creek debouches from the mountains into the broad valley below, about five miles above the site of Rapid City.

On the next day the party explored the valley for about twenty miles toward the Cheyenne river, following as a part of their route the old trail between Fort Pierre and Fort Laramie. Not finding a spot as suitable to their purpose as the land close to the Hills, they returned and



A MESS SCENE ON "ROUND UP."

established a temporary camp at the points of rocks in the gateway of the foot-hills, on the north side of the creek. Here they were joined by a number of men who had followed them from Palmer Gulch, thinking they had left for some new diggings.

A meeting was held on the 24th under a big tree at the point of rocks, on what has since been known as Mallow's ranch, at which the conclusion was reached that the richness of the country explored fully justified the laying out of a town near the foot-hills on Rapid Creek, at some convenient and eligible point looking to the trade of the Hills and the agricultural country below. They fully believed that the valley would some day become the route of exten-

sive travel to and from the Hills, and that a town on the grand gateway would become the focus of extensive business. The stream flowing through the valley and being permanent, carrying a large volume of water, would supply power for mills and factories, which would be needed whenever the country would be inhabited by a white population.

Having fixed upon the site, a town was laid out, Samuel Scott running the courses with the aid of a small pocket compass and a tape line. His assistants in the work were John W. Allen, James Carney and John R. Brennan. The ground thus laid out embraces the present town (city) of Rapid and covers a square mile. It does not correspond with the cardinal points of the compass and this may be accounted for, either by the variation of the compass, about sixteen degrees, which was probably unknown to the party, or it may have been so laid as to conform to the topography of the ground or to the course of the river. The name was proposed by William Martin.

Six blocks were first laid off in the center of the plat, and the lots included in them were drawn by lot by those present, each man being allowed the privilege of drawing five lots. The raffle took place in the center of the plat.

On the same evening a meeting was held and the town organized by the election of five trustees: William P. Martin, John R. Brennan, William Nuttal, John W. Allen, and Major Hutchinson. John W. Allen was elected recorder. The duty of this board, which was elected for one year, was defined to be: "to conduct the affairs of the town for the benefit of its inhabitants. Indians now began to be troublesome, and one night they made a raid upon the camp and ran off seven horses.

On the same day on which the town was laid out a party consisting of Frank Wyman, C. Bates, Fred Edgar, and United States Marshal Ash, arrived at the camp from Yankton, via Pierre, being the first party to reach the Hills by that route. According to the *Journal's* account the first building in the new city was commenced by Sam

Scott on the same day, at the corner of Rapid and Fourth streets. It was constructed of logs and stood till 1879. On the 8th of March following John R. Brennan and Frank Conley were chosen to accompany C. W. Marshall, Fred Edgar, and a Mr. Fields on a trip to locate a route of travel between Rapid and Fort Pierre. The journey was successfully accomplished in six days, though the party encountered a "blizzard" on the way, lost a horse, and were without food for twenty-four hours. At Pierre they found about a hundred men waiting to visit the Black Hills, and about the same time General Campbell, at the head of a hundred or more men, arrived from Yankton at Pierre for the same destination. Arrangements were made for Conley to pilot Campbell's party to the Hills over the newly selected route, while Brennan should proceed to Yankton in the interest of Rapid City, and also for the purpose of filing the plat of Rapid City at the United States Land Office. Brennan was then to return to Pierre and lead the remaining party under one Dillon, into the Hills. The arrangements were successfully carried out, and Brennan reached Rapid City on his return on the 8th day of April.

The country seemed alive with Indians in those days, and they never lost an opportunity to cut off travelers or stampede stock, particularly horses. On the 14th of March they suddenly rode into town and succeeded in running off twenty-eight horses, belonging to Bob Burleigh, Dan Williams, Jud Ellis, John Dugdale and Ben Northington. They came again on the 12th of April, but did not fare as well as in the first attack, for their big medicine-man was killed, while all the damage they inflicted was the killing of a dog belonging to Rufus Madison and the destroying of a wagon.

A new town was laid out about the same time on the creek inside of the foot-hills on ground now occupied by a couple of ranches, since owned by William Morris and Albert Brown. The proprietors were: California Joe, Arthur Harvey, Thomas Madden and a man named Browning.

It would seem that a site inside the gateway would have been preferable to the one chosen, on account of its more sheltered position during eastern storms, but it is said to have been abandoned because it was more liable to Indian attacks. On the 20th of March a party from this last mentioned town laid out still another town in Spring valley, several miles to the north, near where Sacora is now. The party camped on the ground one night during which the Indians surprised them, killed one man and wounded another. This settled the new townsite, for the remainder of the party hastily abandoned the place on the following day.

On the 5th of April W. P. Martin, Ben Northington and several others attempted to lay out a road to Custer. They encamped the same evening on Battle creek not far from Hayward. In the night they were attacked by the Indians and lost some of their stock and all of their wagons and were compelled to flee on foot to Custer, where they at length safely arrived. On the 6th of April a man named Herman was killed on Rapid creek, five miles above Rapid City, and on the 15th Captain Dodge was killed near Spring Valley ranch, while on his way from Bismark to the Hills. On the 16th another man was killed on the Pierre route five miles east of Rapid City.

Hostile Indians were seen nearly every day from the latter part of March to the middle of May. On the 6th of May, Edwin Saddler, W. H. Gardner, Texas Jack and John Harrison were massacred near the head of Bad river on the Pierre road. They were in the employ of John Dillon, hauling freight and passengers between Rapid City and Pierre. In the same month S. C. Dodge, Henry Herring and C. Nelson were killed, scalped and their bodies burned on Rapid creek three miles above the city.

In the spring of 1877, a number of ranches were taken near the town, which improved very slowly. The buildings erected were generally of a poor class. They all stood on Rapid street, but in the following year business changed mostly to Main street and a number of frame buildings were

erected. From June 4 to 9, 1877, the official survey of the town was made by S. H. Coats.

On the 5th of January, 1878, the first number of the "Black Hills *Journal*" was issued by R. B. Hughes and Joseph B. Gossage, who have conducted the paper ever since. On January the 20th, 1878, the Indians made an attack on G. H. Firman's freight train, five miles south of Rapid City, dangerously wounding Mr. Firman. A rescuing party of citizens went out in pursuit of the Indians; they captured a medicine-pole, but the Indians escaped.

The Rapid City of the present day is quite a contrast to the city of the '70's. Now Rapid City boasts of good streets, many banks, numerous stores; churches of various denominations, schools, flour mills, elegant residences and splendid public edifices. Chief among these is the School of Mines and an Indian school founded by the Episcopal church of this place.

The place has all the vim and snap commonly found in all our booming western towns of the present day. Things at present are founded on a solid foundation and are constantly increasing in value. The inhabitants of Rapids have in recent years rapidly increased in number, and are daily growing.

The citizens of Rapids will compare favorably, in culture and refinements, with any of our older communities.

Improvements are constantly going on all around us. Several excellent hotels furnish comfort to many travelers who daily arrive at the city in search of pleasure or business. The city is excellently governed and is strong financially.

Next to Rapid, Rockerville was for a time the most populous town in the county. It is located twelve miles southwest of Rapid, in a pretty valley within the foot-hills, and contains at the present time a population of about 250.

Rich placers abound, and are annually worked with great profit, during the continuance of a sufficient water supply, a lack of which has prevented extensive mining

operations. In August, 1880, the Black Hills Placer Mining Company completed its eighteen-mile flume, and collapsed, and although numerous efforts were made to reorganize, and by others to obtain possession of the property, very little was accomplished whereby miners generally were benefited. The town contains several large substantial buildings and many comfortable residences; and business of all kinds is well represented.

Rochford is located on Little Rapid creek, twenty-five miles south of Deadwood, and contains a population of one hundred, which number will rapidly multiply in view of the early resumption of work at the Stand-by, Minnesota and others of its many excellent mines.

Tigerville, at the head of Newton's Fork, contains a small population compared with the number present during the period of operations of the King Solomon company.

Sheridan, ten miles southwest of Rockerville, is one of the most interesting points in the Hills inasmuch as the first substantial discovery of gold in the Hills was made near this point — July, 1875 — by a party under Professor Jenny, and of which John W. Allen, a present resident of Deadwood gulch, was a member. The camp has experienced reverses and successes, but its fortunes as a settlement have continuously waned until at present its inhabitants are few in number.

Hill City, on Spring creek, the establishment of which occurred simultaneously with that of Sheridan, was for a time a city only in name, a perfect materialization of Goldsmith's celebrated poem. Of late new life has been imparted to it by the discovery of tin and it is here where the works of the tin mines in the Harney range are located.

Harney and Hayward are located on Battle creek, twenty-five miles northeast of Custer, as originally laid out in the spring of '77. They are the center of a productive placer district, the former being the seat of operations of the Harney Hydraulic, and the latter of the Battle Creek Hydraulic companies.

Other places and post offices in Pennington County of

more or less importance are: Silver City, Creston, Dakota City, Deerfield, Etta-Mine, Farmingdale, Keystone, Luverne, Merrit, Moulton, Redfern and Pactola. This last place seemed for a time to grow on account of the placer and copper mines found there.

CHAPTER IX.

CUSTER COUNTY.

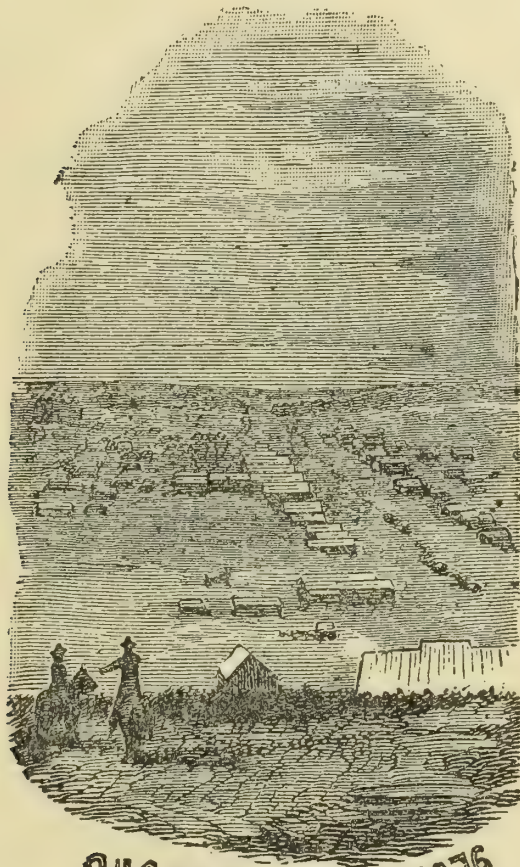
Custer County was organized by the meeting of the commissioners, held at Custer City, in April, 1877. The first meetings of the county officials were held at Hayward, but when it was found that this place was in Pennington County, the records were transferred to Custer, which became the permanent county seat in October, 1879. The county was named in honor of General George A. Custer, who visited the region at the head of a military expedition, as seen above, in 1874. The original county has been divided and Fall River County created from the southern half. The greater part of the county is covered by hard pine timber of a good quality, gold, silver, mica, tin, copper and many kinds of mineral paint are found within the confines of the county.

CUSTER CITY.

The first permanent settlers of Custer City were Judge Thomas Hooper, Charles Caldwell, Samuel R. Shankland and Dr. Flick, in June, 1875. Among others who were there at an early day, were Melvin Dempsey, William Norris, George Winslow, Ernest Faust, J. E. Coffee and several Mexicans, all coming in the summer or fall of 1875. Possibly the Mexicans may not have arrived until January, 1876.

Some accounts say that the first town-plat of Custer City was laid out by Custer's soldiers in 1874, but it is hardly

probable. Samuel R. Shankland, a native of Ohio, came to Custer from Montana in 1875. He accompanied a train fitted out at Sioux City including 166 men and a large number of animals and wagons. The train left Sioux City in April. Mr. Shankland and several others left the train at some point on the route but scattered in consequence of meeting the United States military. Six of them, however, reached the site of Custer in June. A small party consist-



CUSTER CITY - 1876

ing of half a dozen men had come in from Pierre a few days earlier. They were living in "Bear Rock," a cavern situated three-fourths of a mile west from town, and subsisting on "white meat straight."

According to Mr. Shankland's statement the town was laid out in July, 1875, by what was styled a "Town Company," one mile square, the measure being made by a tape-line. It was first called Stonewall at the suggestion of some admirer of the Confederate General, Stonewall Jack-

son ; but the name proved very distasteful to a majority of the miners and was subsequently changed.

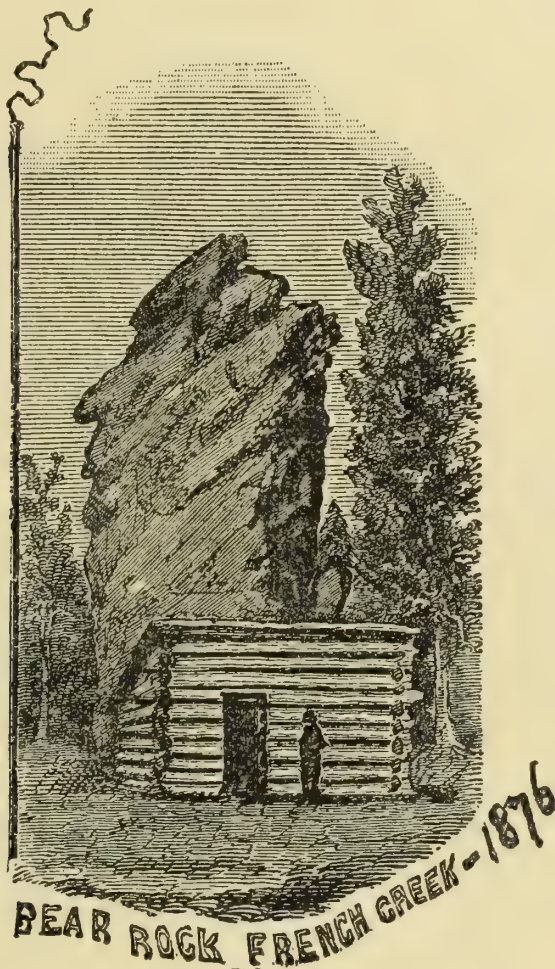
The "Town Company" sold a few lots. In July General Crook, in command of a small cavalry force, arrived in the valley and issued a proclamation notifying the miners that they were trespassing upon Indian territory and must all leave by the 15th of August, or they would be captured and taken out as prisoners by the troops. A general meeting of the miners was held on the 10th of August, at which time a reorganization of the town company was effected, a new company formed and the town rechristened Custer City, in honor of General Custer. The name Stonewall was declared null and void. About 1200 miners were present at this meeting. A new survey of the town was made and the place laid out substantially as before. The lots, about 1200, were all numbered. The numbers were placed in a box and each man drew one number and took the lot correspondingly numbered. These civil proceedings indicated that whatever course the United States authorities might take, the miners proposed to make a permanent settlement at Custer City. If taken out they calculated to return again and again, if necessary, until the Government should get tired of holding it for the Indians and open it by treaty for white occupation.

On the 15th, according to the proclamation, all the miners who could be found, with the exception of Mr. Shanklank and six others left to guard the property, were taken out by Crook's command. The General evidently foresaw the inevitable result of the matter and while technically obeying the orders of his superiors, treated the miners in a manner which plainly said, "Boys, I must obey orders, but you will no doubt come back as soon as released by the military authorities, and eventually get possession of these Hills."

Attempts were then made to treat for the opening of the Hills, and probably the General was aware of the fact, for there seemed to be a universal belief that they would soon be opened to settlement in some manner. About this time

Captain Pollock arrived with four companies of the U. S. Infantry to guard the Hills and prevent their occupation by the whites. He had orders to pursue and capture all trespassers, and seemed exactly in the mood to execute his orders to the letter, though his blustering did not scare the miners. He remained until ordered out by the Government in the following November, 1875.

On the day of his departure there was a rush of miners



who had been keeping a close lookout, and the town was taken possession of. Fourteen log-buildings which had been erected by the military were at once occupied. One building erected before the exodus of the miners was known as "Miners' Hall."

In December, 1875, a new town organization was effected, and officers were appointed by a committee of the whole. This organization continued until March, 1879, when a reg-

ular election was held, and all necessary officers were elected, including city officers, a probate judge, three justices of the peace, a sheriff, city marshal, city attorney, treasurer, board of trustees, deputy sheriffs, etc. At that date the population of Custer was estimated at 5,000, and 1,400 log buildings, which had been erected by citizens and the military.

All parties coming to the Hills took the road by way of the southern approach from Cheyenne, Sidney, the Niobrara river, etc., and consequently Custer City was the first stopping-place of any considerable importance after reaching the Hills. Early in 1876, a post office was established and Thomas Harvey appointed postmaster. He held the office for some six months and was succeeded by J. S. Bartholomew, who, after occupying the position for a few months, was succeeded by F. B. Smith, who held the office till 1878, when S. Shankland was appointed; he remained postmaster for three years, followed by H. A. Albien.

Mails were at first brought in by parties connected with incoming trains, and from twenty-five to fifty cents was charged upon the delivery of each letter. The square mile occupied by Custer City was patented in April, 1882. The city plat being situated on unsurveyed land and being laid out originally without proper instruments, does not conform to the regular government survey but lies diagonally to them at about the angle of north 21° west. This may have been done intentionally in order to make it conform to the topography of the valley.

Early in spring, 1876, rumors of rich gold diggings in the Deadwood gulch began to circulate, and in May the excitement became so intense that a great stampede from the southern hills was the consequence, and as many as a thousand people left Custer in one day. The population diminished in a few weeks from 6,000 to about 30 persons. The 1,400 log cabins were gradually torn down and used for fuel. In the fall of 1876, General Crook returned from an expedition to the Big Horn country and stopped at Custer with a force of about twelve hundred men. This

called a considerable number of people to the place, partly from Deadwood and partly new-comers to the Hills. The population in the fall and winter of 1876 had grown to be about 400, which continued with little variation until 1878, when mining excitement in various places caused it to diminish once more, so that by an actual census taken September the 5th, there were only fifty-seven persons inhabiting the pioneer-city of the Hills — thirty-seven men, eleven women, and eleven children. Since that time the population has steadily grown until at this time there is a considerable number of people who make Custer their home.

Custer City is finely situated in the upper valley of French creek in about latitude 43° and $45'$ north, and longitude about 26° and $35'$ west from Washington. It lies south, a little east of Deadwood, and distant about forty-five miles in an air-line. From Rapid it lies about southwest, and by the wagon road forty-five miles distant, but in an air-line scarcely thirty miles, and is distant from the line of South Dakota and Wyoming about twenty-two miles in a direct line. Its elevation above tide-water is approximately 5,500 feet. Observations with various barometers vary from 5,300 to 6,700. The valley where the city stands is about a mile in width and widens toward the east and the west. The situation is beautiful and romantic in the extreme, and especially in the growing season is the valley a paradise of grass and flowers. It is said that in June and July as many as 160 varieties of wild flowers are in blossom.

Custer in 1895 is described thus by F. R. Shankland, of the *Custer Chronicle*:—

“Custer is and has been steadily progressing for years. During the past year Custer has shown more improvements than any other Black Hills' town. Her railroad facilities are great and her business, as shown by the records, has increased over forty per cent over last year. The out-shippments have increased \$1,500 per month in the aggregate freight bills over the corresponding months of 1894. This

city is the largest lumber shipping point in the Hills, shipping more than all other towns combined. Twenty steam saw-mills are in operation, employing over 250 men. The present population is about 1,000 and increasing rapidly. Two steam planing-mills are running constantly. The axle-grease factory is just completed and in operation, making the product from native mica, plumbago and oils. The gold and other mineral resources are receiving increased attention, two new gold mills having been put in operation here in the past month. Everything is in a flourishing condition and while it is unnecessary to go into details it may be safely said that Custer is on the high road to enduring prosperity and commercial prominence."

Other places of more or less importance, and post offices in Custer County are: Buffalo Gap, renowned for its great stone quarries of fine sandstone; Fairburn, Hermosa, Folsom, Martin Valley, Otis, Phinney, Rocks, Spokane and Wind Cave.

CHAPTER X.

FALL RIVER COUNTY.

Fall River County lies in the extreme southwestern portion of the Black Hills and is bounded on the west by Wyoming and on the south by Nebraska. It was created March 6, 1883, the area being 1,036,800 acres. About two-thirds of this land is good for grazing and agriculture, the remaining portion being hilly, mountainous and heavily timbered.

THE CITY OF HOT SPRINGS, OR MINNEKAHTA.

Is the county seat of Fall River County, and is situated 3,400 feet above the level of the sea in one of the prettiest valleys of the Black Hills. It contains 2,500 inhabitants, and each year its growth surpasses that of preceding years.

Its citizens are young, enterprising, and fully in accord with the modern needs of this progressive age. The business buildings are of the most substantial class.

Here are situated the celebrated Minnekahta Springs. The Indians, who well knew the curative powers of the waters at this place, called it Wi-wi-la-kah-ta (springs hot). Tradition among them has it that about two hundred and fifty years ago an epidemic of great violence attacked all of the Indian tribes of North America, and it soon became manifest that the whole would become extinct if the fell destroyer was not arrested. When their ranks had been decimated, when death had again and again entered the wigwam of the chief and the warrior, when lamentation for the dead had become universal, a messenger arrived from the West with news of the wonderful water which he said had been touched by the finger of the Great Spirit, and that this water would cure all manner of diseases. With the eagerness that the people of all ages have seized upon a last resort for ills, the Indians seized upon this hope, and they repaired by thousands to the wonderful waters of the Black Hills and were saved.

From that time to this, the Dakota Hot Springs have been the great resort of the Indians of the West. It is well known that they considered the Black Hills the abode of the Great Spirit; the lofty peaks were the fortifications built by him around his home, and the towering rocks the sentinels standing guard. After the Cheyenne came to the country they took possession of the springs until the great battle was fought between them and the Sioux at a place about a mile and a half from the Springs.

In this battle the Sioux were victorious and thereby gained possession of the Springs, which they retained till the country was ceded by them to the whites in 1877. It is alleged that the Sioux were more loth to part with the Springs than with the balance of the Black Hills country. Sheltered from the storms that touch the crowns of the Hills, protected by grand old canyons, enriched by cooling breeze, the dryness and salubrity of the atmosphere, and the mod-

erate elevation of the sea level (3600 feet), Hot Springs is a Mecca set down in the heart of the Western World, towards which thousands of pilgrims in search of health and recreation are wending their way annually. It has been called the Carlsbad of America.

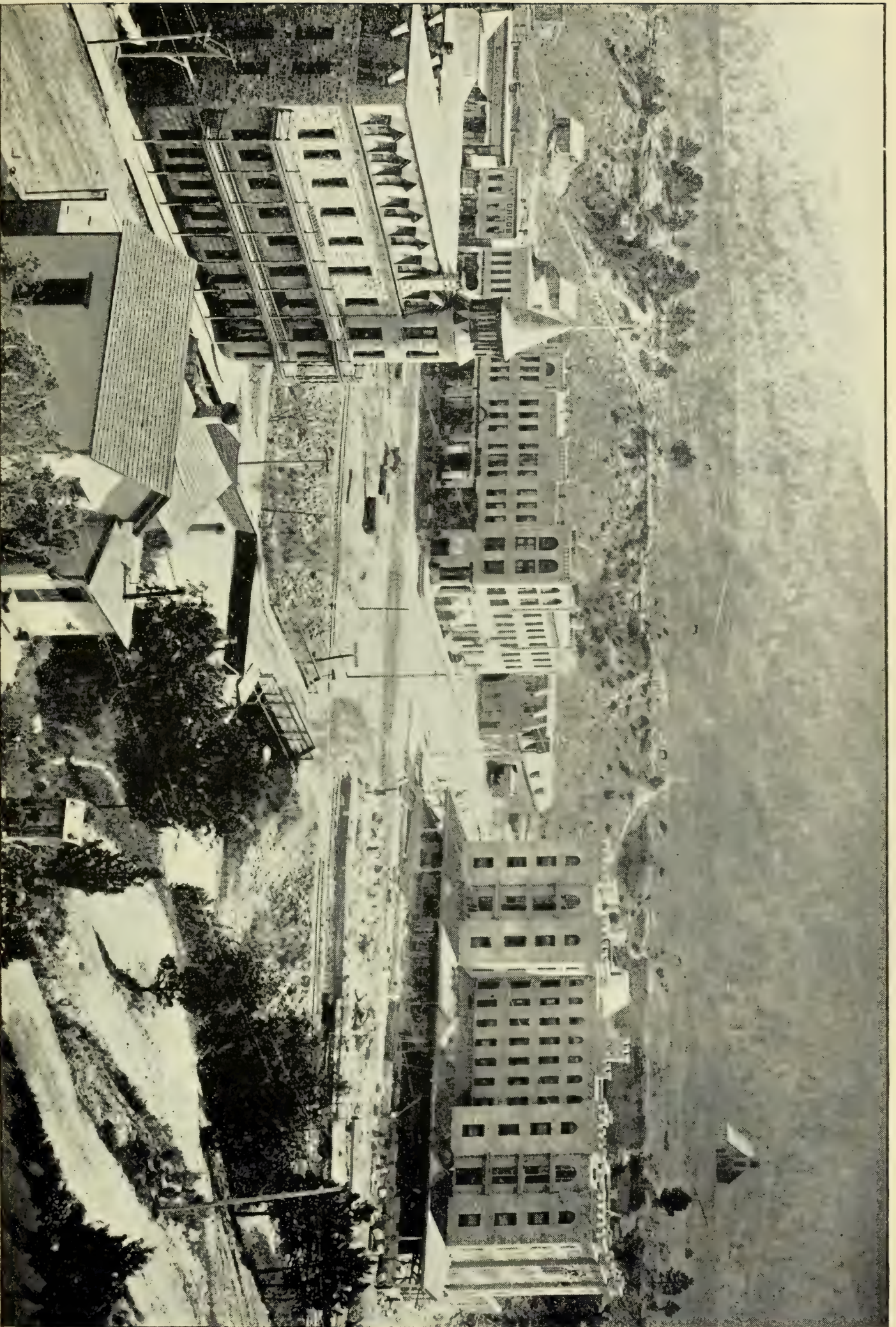
One of the great advantages of these springs is that their temperature is the same as that of the human body, and the addition of cold water or exposure to the atmosphere to render the water suitable for bathing purposes is unnecessary. For this reason the waters retain all their disease-curing virtues. The principal springs are six in number, issuing from fissures in the solid rock. The flood of water from these springs is great, but there are many smaller streams situated close to them. A magnificent plunge bath, 50x250 feet, has been built of stone, iron and wood, and provided with all the conveniences and apparatus known in modern times. The water in this colossal bath-tub, which contains 500,000 gallons, and varies in depth from four to eight feet, is never still, as it rushes through an orifice at the south end of the building at the rate of 100,000 gallons per hour.

As to bath-houses wherein patients may be privately treated, Hot Springs finds itself splendidly equipped with all the modern appliances for administering spray, electric, vapor, salt, needle and tub baths, Turkish and Russian baths.

It was in the fall of 1882 that I visited the Hot Springs first. At the time I took a bath in the tub, cut out of the solid rock by the Indians, in the form of a moccasin.

Of the various theories that prevail in regard to these springs, which have flowed, probably, since the upturned rocks, mica-schists, slates and quartzites of archæan time took on their present appearance, the one most generally accepted is that the waters are heated by the absorption of highly-heated vapors and gases which emanate from sources deeper seated than the fountain head of the water itself.

During the year 1882, a company was formed, by which the springs were located, together with 320 acres of beau-



HOT SPRINGS, SOUTH DAKOTA.

tiful valley in which they are situated. The company was duly incorporated under the laws of Dakota, October 24, 1882, being designated in the act as: “The Dakota Hot Springs Company;” the corporate members being Hon. E. G. Dudley, Leonard E. Graves, Randolph D. Jennings, Col. Fred T. Evans and Dr. Alex. S. Stewart.

The capital stock of the company consists of \$2,000,000 in stock organized on the property, and divided into 40,000 shares of the par value of \$50 each.

An analysis by Prof. G. A. Mariner, chemist, Chicago, Ill., resulted as follows:—

Constituents.	Grains.
Silica	2,464
Peroxide of iron.....	A trace
Calcium sulphate.....	16,352
Magnesium sulphate.....	4,320
Sodium sulphate }	25,620
Potassium sulphate }	
Sodium chloride and potassa	13,790
	<hr/>
	62,546

The chemical combination is so perfect that, notwithstanding its great specific gravity, the water is clear as crystal, through which the smallest object can be seen at a great depth.

While the greatness of this gem city of the Black Hills is due to its wonderful thermal springs, and the marvelous cures they have accomplished, there are other attractions which can be found at no other resort in the country. Nature has been profoundly lavish in her gifts to this American Arcadia. Not only has she enriched the earth with minerals that are the wonder of the world, and placed beneath the surface endless quantities of building stone, but there are drives that lift one above the “dull, commonplace things of earth.”

On the east, Battle Mountain towers aloft, overlooking the valley in which the village nestles, and out-topping the

surrounding peaks; on the west, Gypsum Butte rears its ambitious head skyward, crowned with its conical peak of red clay, and almost destitute of vegetation. Down the canyon, and in the rear of Catholicon Springs, Dennis' Peak stands out boldly against the sky. From each and all of these heights magnificent views may be obtained over a wide stretch of country, and the valleys beneath are intersected by walks, drives, and shady canyons.

Ten miles north of Hot Springs, and reached by comfortable coaches, running every day during the summer season, is located the destined "show place" of America, Wind Cave, so called because of the almost continuous outrush of wind from its mouth. Nature is seen here in its ruggedest, most beautiful and, withal, grandest aspect. Greater than the world-famous Mammoth Cave of Kentucky, more wondrously beautiful than the Wyandotte Cave of Indiana, or the Cave of the Winds in Colorado, it is a most impressive object-lesson of the power that created it. Thirteen separate routes have been explored, covering ninety-one miles of passages, although, properly speaking, there are no separate or distinct routes and no termini, as by connecting passages the routes may be indefinitely extended. Three years constant explorations have only served to dimly outline the proportions the cave may finally reach. The depth below the surface varies from three hundred to a thousand feet, notwithstanding that on the walls of the chamber in which the "Silent Lake" is located a party of United States surveyors, in September, 1892, placed the altitude of the cave at 3885 feet above sea level, Black Hills meridian. Twenty-one hundred chambers have been explored, at some places the cave being eight tiers deep.

Three hundred and seventy-five chambers have been named, largely by visitors who have represented the nations of the earth, come to view this wonder-place of the century. These chambers are glistening with crystallizations, or are cut into geometrical figures by beautiful box-work formations which line the walls, suggestive of some marvelous artist of old ornamenting the rooms for kings and queens of the underground dominions, or hung in frost work as

airy and as delicate as the paintings of the real Frost King upon the windows at winter time, evanishing at the slightest touch. There are many routes which require hours in their exploring, but the one most commonly taken leads to the "Garden of Eden," which surpasses in the delicacy of its adorning any similar chamber in the world. In extent it is about three hundred feet square, and so weird and strangely beautiful are its sides and arches hung with the filmy frostwork, twisted and modeled into wondrous shapes, that the tourist leaves it with much of the same regret which our progenitors left that other Garden of Eden when the "morning and evening stars sang together."

Hot Springs is the seat of the Soldiers' Home of South Dakota, which stands as a proud monument to the patriotism of the people of this young State, and an honor to the noble army of soldiers whose fast-thinning lines tell a sad story of the "tooth of time." Standing upon a delightful elevation overlooking the city, surrounded by natural groves of evergreen, rugged rocks, ravines and pyramids of gypsum mounds, the building, 85x132 feet, three stories in height, warmed by steam, and supplied with water from the Jennings Springs, bids a hospitable welcome to the worn and weary veteran to come and spend his declining years in comfort, surrounded by all the charm which nature offers here in an endless succession of beauty pictures. Here is also situated the Black Hills College in charge of the Methodist Church.

The curative properties of the Hot Springs are enhanced by the building-up process induced by the rarity and purity of the atmosphere. The following is the altitude of prominent places in the Black Hills:—

	Feet.
Harney's Peak.....	8,000
Custer Peak.....	6,932
Battle Mountain.....	4,700
Custer City.....	5,400
Crook's Peak	7,215
Deadwood	4,780
Hot Springs.....	3,400
Bear Butte.....	6,000

Taken all in all there are few more delightful places to visit, whether you are in search of health or pleasure and both the Burlington and Northwestern Railway line will take you there. Their services are unexcelled and every care is taken for the comfort of the passengers.

Other places and post offices of more or less importance in Fall River County are: Arkmore, Cascade Springs, Cheyenne Falls, Eckard, Edgemont, Evans Quarry, Maitland, Oral, Smithwik and Oelrichs. This last place was for a time the great shipping point for cattle and killed beef to the Eastern market.

CHAPTER XI.

BUTTE COUNTY.

This county, which is bounded on the north by the forty-fifth parallel, on the south by Lawrence County, on the east by the one hundred and third degree of longitude, and on the west by the State line of Wyoming, was organized by act of the legislature in the winter of 1883, and ratified by a vote of the residents within the boundaries above described. It is watered by the Belle Fourche and Red-water rivers, and Owl, Horse, Indian, Crow and Hay creeks, all of which contain vast volumes of pure running water of the most excellent quality. The valleys of these streams are among the richest of the agricultural sections of the Black Hills, and every variety of small grain and vegetables have been raised successfully every season since 1877, and the harvests have been unusually bountiful, in fact the vegetable market of the entire Black Hills depends mainly on the gardens in these valleys for its supply. Corn also, both the dent and flint varieties, matures and yields abundantly, and there are still thousands of acres of as good land as can be found open to settlers.

The county is heavily timbered with pine, ash, oak and

cottonwood, both on the streams mentioned and on the divides, which are rolling prairies abounding in deep gulches and ravines, which afford excellent pasturage and shelter to the thousands of heads of cattle and horses now being raised in the confines of the county. To give some idea of the wealth derived from the stock interests, we have only to mention that there are fifty stockbrands recorded at present on the county records and that the majority of these brands represent herds numbering over one thousand head each, while a few number over ten thousand head each. Clark & Plumb's, one of the largest interests, count about twenty-five thousand. These cattle range on the north of the Belle Fourche river, and some distance from the agricultural districts on the Redwater and valleys south of the Belle Fourche, consequently, the interests of the farmer and stock raiser do not conflict in any way. The county, although comparatively new, is to-day from a financial stand-point, the peer of any county in Dakota, and the taxes proportionately light, which renders it very attractive to all capitalists and emigrants. The county seat, Minnesela, is situated on the Redwater river, which affords the finest and most powerful water privilege in the West. The town site was laid out by Hon. A. A. Chouteau and D. T. Harrison in 1881, who at once proceeded to erect a flouring mill furnished with six sets of rollers and all other machinery of the latest and most approved styles, and to-day, as a result of the enterprise of these gentlemen, Minnesela is a flourishing village and the principal supply depot for the cattle camps located on the Little Missouri and Grand rivers.

Other places in Butte County and post offices are: Butte, Empire, Mary, Scoma, Vale and Belle Fourche. This last place is at present the terminus of the F. E. & Mo. V. R. Ry., and the greatest cattle shipping point in the Black Hills. It may be said that the place is only a shipping point, as the development of the country in other resources does not yet permit of a large population.

COUNTY DEBTS, JUNE 1, 1889.

COUNTY.	Amount of Bonds Issued.	Amount of Warrants Outstanding.	Amount of Cash in Sinking Fund.	Cash on Hand for Warrants.
Butte.....	\$14,849	\$603	\$1,931	\$5,401
Custer.....	58,846	25,260	6,548	282
Fall River.....	.....	18,751	.....	2,652
Lawrence.....	847,750	83,813	313,986	2,489
Meade.....	156,800	274,800	.....	742
Pennington.....	64,900	12,563	2,790	10,522
Total.....	\$1,142,695	\$135,444	\$325,357	\$21,691

POPULATION.

COUNTY.	Votes Cast for Governor, October 1, 1890.	Estimated Population.
Butte.....	326	1,630
Custer.....	924	4,620
Fall River.....	686	3,430
Lawrence.....	3,582	17,910
Pennington.....	1,625	8,125
Meade.....	1,121	5,605
Total.....	8,264	41,320

CLEAR, FAIR AND CLOUDY DAYS IN THE BLACK HILLS IN 1888.

Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Clear. 14 15	Clear. 2	Clear. 9	Clear. 10	Clear. 5	Clear. 4	Clear. 9	Clear. 10	Clear. 7	Clear. 3	Clear. 2	Clear. 14
Cloudy. 1	Cloudy. 5	Cloudy. 1	Cloudy. 12	Cloudy. 10	Cloudy. 15	Cloudy. 14	Cloudy. 10	Cloudy. 20	Cloudy. 11	Cloudy. 6	Cloudy. 12
Fair. 1	Fair. 6	Fair. 10	Fair. 12	Fair. 16	Fair. 11	Fair. 14	Fair. 10	Fair. 20	Fair. 14	Fair. 8	Fair. 12
.....

MEAN TEMPERATURE, 1888.

Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean Annual Temperature.
16.7	20.5	31.1	42.5	55.2	55.5	72.0	71.2	59.1	46.5	32.6	22.2	14 5

PRECIPITATION, RAINFALL AND SNOW FROM 1878 TO 1888.

Jan.	Feb.	Mar.	Apr.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean Annual Precipitate.
1.04	1 26	1.99	5.02	4.70	3.69	2.33	2.12	1.38	1.84	1.35	1.50	28.23

APPENDIX.

MINING.

Nowhere could I find a more concise, clear and instructive history of this most important and lucrative industry, than in the lectures delivered at the School of Mines in Rapid, South Dakota, during the Academic year 1887-1888, by my esteemed friend, Hon. Judge Daniel McLaughlin of Deadwood, S. D.*

I give some of these lectures in toto and am more

* Daniel McLaughlin was born in Troy, New York, April 7th, 1831. Living with his parents in this place he attended the local school for a few years, till in 1841 the family removed to Wisconsin. From there he went to Carroll College, Waukesha, Wis., and began the study of law, in 1854, under A. W. and G. M. Randall, of the latter city. He also spent some time in the law office of James Grant at Davenport, Iowa, and was admitted to the bar at Dakota City, Nebraska, in 1860, where he practiced for a few years. In 1861 he was married at Omaha, Nebraska, to an accomplished lady, Miss Ellen McCune, a native of Ireland. He was elected in the same year a member of the Territorial Legislature from Dakota County. The next year he moved to Oregon and from that time till his arrival in Deadwood, April 27th, 1877, he spent his time in Oregon, Idaho, Utah, and Cheyenne, Wy., everywhere being esteemed for his integrity, experience and prudence as a lawyer. To him, perhaps, more than any one else, was due the arrival of the first priest in the hills, and during the last twelve years he at all times seconded the efforts of the various priests in Deadwood to relieve poverty and distress wherever known. Foremost in every undertaking which could benefit his fellow-citizens he is esteemed by all inhabitants of the Black Hills. When the city of Deadwood was organized as a city government in 1881, Judge McLaughlin was its first mayor, and during the recent election for judges for the Supreme Court of the new State of South Dakota he was nominated to be one of them. The nomination was carried against his will and if he had exerted his influence in his behalf he would have been elected, though the nominee of the other party is his personal friend, the esteemed and learned Judge D. Carson.

Two sons are left of their children, William and Daniel, both graduates of Georgetown University, District of Columbia, who are the model of young men. The elder filled the office of District Attorney for two years to the greatest satisfaction of the whole of Lawrence County.

than convinced that the contents will be appreciated by the reader.

They are copied from the manuscript with the kind permission of the honorable gentleman and that of the Board of Directors of the School of Mines.

LECTURE NO. I.

A SHORT HISTORY OF MINING.

“ There stood a hill not far, whose grisly top
Belched fire and rolling smoke; the rest entire
Shone with a glossy scurf, undoubted sign
That in his womb was hid metallic ore,
The work of sulphur. Thither, wing'd with speed,
A numerous brigade hasten'd; as when bands
Of pioneers, with spade and pickaxe arm'd,
Forerun the royal camp, to trench a field,
Or cast a rampart. Mammon led them on,
Mammon, the least erected spirit that fell
From heav'n; for ev'n in heav'n his looks and thoughts
Were always downward bent, admiring more
The riches of heav'n's pavement, trodden gold,
Than aught divine or holy else enjoy'd
In vision beatific. By him first
Men also, and by his suggestion taught,
Ransack'd the centre, and with impious hands
Rifled the bowels of their mother earth
For treasures better hid. Soon had his crew
Open'd into the hill a spacious wound,
And digg'd out ribs of gold.”

[*Milton's Paradise Lost, Book I.*]

Despite the learned conceits of many eminent men regarding the origin, progress and development of the human race, as the centuries have rolled by, the world proceeds upon the assumption that the wants of man from the beginning, were supplied through his own efforts and the beneficence of the Creator. His knowledge was always commensurate with his needs. His appetites, taste and ambition are similar now to what they were fifty centuries

ago. He then made love and war, tended herds, tilled the soil, built towns and cities, made voyages in ships on water and traveled by vehicles and carriages by land. Enduring monuments of his knowledge and skill are being now exhumed by the learned and curious from the deserts of sand beneath which they have slept peacefully, while other portions of the world have advanced from comparative savagery to an advanced condition of civilization.

Who can with certainty foretell whether the civilization of the present day is not destined by the decrees of fate, to be succeeded by desolation and solitude, like that of Memphis, Thebes and Troy? Are there not innumerable proofs in Arizona and Central America of once populous cities, existing away back in the distant past — of temples of worship whose dimensions and solidity excite the wonder of modern travelers? Where are the intelligent beings who constructed those durable buildings? Certainly they have not progressed and developed into a more intellectual race of men or a higher order of humanity. They ceased to exist; not even the “fittest” have survived.

But let us pass from a consideration of prehistoric civilization as evidenced by its ruins, to that of the antiquity of mining for the metals. In various parts of the two hemispheres implements of war and domestic use have been found — forged from metals and alloys, in such places and under such surroundings as to denote that the men who made, and the men who worked or fought with them, had returned to dust long, long before Tyre and Sidon were founded. For this purpose we shall make use of the Septuagint chronology, because it accords more nearly with the Hindoo, Babylonian, and Chinese than the Hebrew computation of time, and seems to have been more generally accepted in Europe and America.

The Hindoo chronology fixes the date of man's creation at about 6174 years before the birth of Christ; the Babylonian at 6158 B. C.; the Chinese at 6,157 B. C.; the Septuagint at 5,508 B. C., while the Hebrew — which is nearly the same as the Greek, dates man's creation 3760

years before the Christian era. It is from the call of Abraham to the flood, and from the flood to man's creation wherein the great chronological differences exist between the Septuagint and Hebrew calculation: Thus: Septuagint, from the creation of Adam to the flood, 2262 years; Hebrew, 1656 — difference, 606 years. From the flood to Abraham, about 300 years by the Hebrew chronology; by the Septuagint, 1147, a difference of 847 years.

Accepting the old Testament as a Hebrew history of the creation, and the peopling of the globe, Moses, an older historian than Herodotus, who is often styled the father of history, informs us that Adam and Eve had two sons and one daughter, and that the son Cain killed his brother Abel and became a fugitive on the face of the earth. His wife Sella brought forth a son who was called Tubalcain, who became "a hammerer and artificer in every work of brass and iron." (Genesis IV. Chap., 22 verse.) Think of it, the grandson of Adam a learned blacksmith, and a cunning artificer more than seventy centuries ago. But the miner and the metallurgist must have preceded Tubalcain or he would have had no iron and brass to work.

Brass is a compound of zinc and copper. Zinc and copper, as well as iron ores, must have been mined and smelted before Adam's grandson hammered them; and the wants of the human family for "every work in brass and iron" were the necessity for their production, and the supplying of this want implies a high degree of knowledge in those olden days. Other grandsons, according to the same authority, were herding flocks, tilling the soil, and building cities. The longevity and fecundity of people in those early times are supposed to have been very great, and that the blessing to multiply and replenish the earth was liberally bestowed and realized.

We are not advised who the first miners were, but they certainly preceded the first blacksmiths. Lucretius, a Roman poet and philosopher of the first century before Christ, states that "the use of brass was known before that of iron." He does not give his means of knowledge

of this important statement. Neither are we advised by the Mosaic account whether Tubalcain was a “born” blacksmith or picked up his trade at somebody else’s shop. What we may be certain of, is that in the order of time mining preceded blacksmithing, and was contemporaneous, if it did not precede, town building. Inferentially we conclude that mining for some of the baser metals and the manufacture of brass was known to the ancients shortly after the gates of the terrestrial Paradise were closed upon Adam and Eve, and before their grandson became a “hammerer” and an “artificer” in metals.

However the knowledge was acquired by the men and women of those days, requisite to the production and manufacture of what was needful to their existence, they possessed it. They ate and drank, piped and sang, made love and war, like those of later times, and they wore metal ornaments, had metallic instruments of attack and defense, like people of modern days. Neither is it reasonable to conclude that they inherited this knowledge from the “missing link” with a caudal appendage, who was evolved through the æons of protoplasm.

Almost twenty-five hundred years before the Christian era Homer sang the praises of Vulcan and the high art of which he had command, something after this fashion:—

And first a shield he fashioned vast and strong,
With rich adornments; circled with a rim,
And on its surface many a rare design
Of curious art his practical skill hath wrought.
Thereon were figured earth, and sky and sea,
The ever-circling sun and full orb'd moon
And all the signs that crown the vault of heaven.

For decades Egyptologists who have been prospecting the land of the pyramids, and opening and ransacking the tombs of the departed Rameses, Pharaohs and other kings of the Egyptian dynasty, and deciphering the glories and fame of that renowned and ancient people, in the hieroglyphics carved on the hardest of igneous rocks in the early morning of time, with forged tools, tell us, that as far back

as the reign of King Menes, the first monarch of the first thirty-one dynasties that ruled in Egypt preceding the Christian era, indubitable evidence has been found to prove that both base and precious metals were known to and used by that people; and that long before the foundation stones of the pyramids were quarried from the places where they had been laid down by the causes set in motion by the Creator, mining must have been carried on. Coins of the fourth dynasty struck by public authority, ornaments and domestic utensils of gold and silver, durable tell-tale papyri have been recovered from these graves of the past, which show a high degree of civilization a score of centuries or more before Herodotus traveled and wrote about Egypt.

An Italian named Giovana Batista Benzoni, born near the close of the last century, became a great traveler and explorer in Egypt, in the early part of this. The mountains up the Nile were a favorite field for his investigations, and he reported that he had found in the Zabara mountains the ancient mines of the Egyptians, which are supposed to have supplied the Rameses and Pharaohs and other kings of Egypt their abundant supply of the precious metals. That these kings possessed great wealth in gold and silver has been often remarked by the early historians. The Mosaic history tells us that owing to a famine prevailing in his country Abraham went out into the land of Egypt, and tarried there awhile. The time is fixed by the Egyptian chronology at about 2698 years B. C., and according to the Septuagint about 2550 B. C. He returned to the land of Canaan laden with presents, and the text reads: "He was very rich in his possessions of gold and silver." (Genesis, Ch. XIII, verse 2.) And when some three or four hundred or more years thereafter the captive Israelites were getting ready to leave Egypt for their home they borrowed vessels of silver and gold from their stiff-necked masters to a fabulous extent, which they did not return.

Throughout the books of the old Testament frequent allusions are made to the abundance of vessels of silver and

gold. The sacerdotal robe of Aaron, the High Priest of the Jews, had plates and wires of gold, and threads of gold were woven into it. Breastplates made of gold to be hung or fastened with golden chains were not uncommon. Aaron prepared a golden calf for the Israelites to worship. Vast quantities were lavished in building the Temple of Jerusalem in Solomon's day, showing that the Jews had access to mines of great extent and richness, or were dealing with those who had; and as usual were getting the best of the bargain. In later times, near the Christian era, the Jews are accredited with being among the most skillful miners in the Roman empire.

The Phoenicians are another nation whose early origin is obscured in the dim twilight of antiquity. They were a commercial, as well as a conquering people, whose ships and arms reached the ends of the earth, before the stones for the Temple of Minerva were piled on the Acropolis of Athens. They had mines in various countries yielding a rich return in the various metals—precious and base, and with them gold and silver were a medium of exchange and an article of commerce. In the countries of the Tigris and Euphrates two powerful nations of antiquity—the Babylonians and Assyrians—had large cities and great wealth in their day, and it is reasonable to infer that much of their metallic wealth came from mines of their own which they had worked.

But what is certain, is, that the greater part of the gold of antiquity was obtained from placer deposits, by the process of washing.

THE STORY OF MIDAS.

Midas, one of the real or mythical kings of Phrygia, was something of a musician on a lyre, having been taught how to extort sweet sounds from that instrument by Orpheus. Likewise he was a worshiper at the shrine of Bacchus. A jolly old Satyr named Silenus, who was also a pious and regular worshiper at this shrine, took a liberal potation

from his winebag one day, and in his hilarious mood strolled into the flower gardens of the King. He was captured by some people in his maudlin condition, his unsteady head was crowned with a wreath of flowers, and his uncertain legs bound with a rope of roses, and thus he was led before the King. That monarch instead of ordering him sent to the "cooler," treated him with kindness, and returned him safely to the Bacchanalian temple. This so pleased the god that he told Midas to ask him for a favor, which would certainly be granted. He did so; and his request was that whatever he touched might be turned into gold. The request was granted! When Midas attempted to eat or drink, the food and wine became solid gold; his soft luxurious couch of down was transformed into a hard metal bed when he attempted to recline on it; and the disadvantages of becoming suddenly rich were realized. The gratification of his wish brought him such inconvenience that he cried out to the god to take back his gift, or he would perish. Bacchus directed him to betake himself to the headquarters of the river Pactolus, and bathe in them, and he would find relief. He bathed as directed and the sands of the stream became golden grains. Midas was cured of his avarice.

This Phrygian King was called upon one time to umpire a musical contest between Pan and Apollo, as the story relates. He awarded the palm to the performer on the flute, and Apollo took sweet revenge by changing his ears into those of an ass.

MORAL.—Never be an umpire!

Another pretty tough story has floated down the stream of time, about the vast accumulation of gold by a single individual. A king of Lydia, Cræsus by name, who flourished about the middle of the sixth century B. C., was at one time a mighty monarch, ruling no less than thirteen nations, besides having allies in many more. His confiscations of individual estates, and his exactions of enormous tributes of gold from the nations subject to him, brought him immense wealth. He opened and worked mines in

different parts of Asia and Africa, and the golden product was transferred to his treasury. The small stream in Lydia, in which Midas bathed, that ran down from the Mount, near by the city of Sardis into the sea, was famous as having enriched this greedy king. His fame as the richest man spread throughout the world. Tiring of the repute, he thought of building up another — of generosity to the gods. His presents to the temples of heathen divinities were munificent.

Herodotus, a close observer and extensive traveler, who wrote history about the middle of the fifth century B. C. relates that he saw 117 ingots of gold — each six palms long, three broad and one deep, in the “Treasury of the Temple of Delphi” which this rich king had presented to the oracle. In various parts of Greece he beheld other rich offerings which had been deposited by him to propitiate the heathen divinities. In one a life-sized golden lion, in another a wine bowl of equal weight, in a third a lustral vase, and in a fourth a statue of a woman three cubits high (60 inches). But all his wealth and regard for the gods brought him neither contentment nor safety. Cyrus the Persian routed him in battle, pursued him into the city of Sardis, made him a prisoner, and sentenced him to be burnt alive; but finally spared his life.

Many of the mines which he owned throughout Asia Minor were profitably worked long years after his death.

The Chinese have traditions that gold mining was extensively carried on in various parts of the flowery kingdom five thousand years ago, reckoning according to their chronology. This is not altogether improbable, as their computation of time is based on a series of cycles that increases the number of years from one given epoch to another, over the Septuagint chronology.

In 1862-3-4 and 5, a geological exploration and examination of a large part of China and of a part of Japan was made by Prof. Pumpelly of Harvard, assisted by Prof. Blake, and he reports that gold exists in fourteen out of the nineteen provinces of the former, mainly in placer deposits.

The gold was brought down to its present resting-places by rushing floods in the seasons of much water, and what little mining was being done was by the sluicing or rocking process. Little or nothing could be learned of the yield, as the government is averse to the production of gold by mining, because it is not in accordance with its modern financial theories. The gold bearing formations of Eastern Siberia extend into Chinese Tartary, and are believed to unite with those of Central and Southern China.

The ancient Scythians who roamed at will for centuries over the high lands of Eastern Europe and the steppes of Eastern Asia, "milking mares and eating cheese," as Homer says of them, are believed to have had a knowledge of mining, as many ancient worked out mines were found since their days on the slopes of the Ural range. It is certain that these mountains were, and are yet, gold-producing; and it may be that before the Scythians became the nomads of later times they may have engaged in mining as a means of supplying themselves with the metal universally accepted as a medium of exchange, but nothing certain is known about this now.

Herodotus wrote that in the tablelands of Thibet, where the Indus takes its rise, there were gold placer deposits that yielded an immense production of the precious metal in former times, and that in his day traces of ancient mining were extant.

Then there was the land of Ophir, to which Solomon and the Phœnicians sent ships to bring back gold, and it was at such a distance that it took three years to make the trip. But where is this Land of Ophir? Much speculation has been indulged in as to its whereabouts, and with all our modern knowledge of ancient geography, still the region is one of uncertainty. From the character of the cargoes brought back by Solomon's ships — ivory, spices, precious stones, ebony, apes and sandal wood, as well as gold, it is inferred that it was in the land of the tropics — in some part of Asia or Africa.

Vein or lode mining as now carried on was unknown to

the ancients — at least evidences of it are wanting until about the sixth or seventh century B. C. Then rude methods on the principle of the arastra appeared. The smelting process had been long in use to reduce silver and copper ores as well as iron. (See Job, xxviii. Chap.)

THE LEGEND OF JASON AND THE GOLDEN FLEECE,

which lives in story and in song, is now thought to be bottomed on primitive gold prospecting, and its attendant risks and attractions. A free rendition of it is as follows:—

Phryxus and Helle, two ancient babes in the woods, were doomed by their stepmother Ino to be sacrificed to Jupiter; but their mother Nephele rescued them and putting them on the back of the ram with the Golden Fleece, he rode away with them through the air. While crossing the sea Helle lost her seat and fell into it, which ever after has been called the Hellespont. The ancient mythical Leander used to swim this sea every night to visit his love Hero, but was drowned afterwards.

Phryxus arrived safely in Colchis, and King Ætus gave him one of his daughters in marriage. Phryxus then sacrificed the ram to Jupiter, and gave the Fleece to his father-in-law, who nailed it up on an oak in the Grove of Mars, and set a sleepless dragon to guard it day and night. Some time after this a king in Thessaly named Pelias, who had deprived his brother of the throne, and had become jealous of his nephew Jason, owing to some mutterings of the oracle, persuaded the latter to go in quest of the Golden Fleece — in other words to seek his fortune elsewhere.

Argos, a son of Phryxus, built a fifty-oared ship for him which he named after the builder. He induced a number of famous men to accompany him — gold hunters always do this — Hercules with his club, the brothers Castor and Pollux, two sons of old Boreas — Zetes and Calatis, the singer Orpheus, the Athenian warrior old Nestor, who distinguished himself at the siege of Troy, Theseus the slayer

of robbers and of the Minotaur, and who captured the famous Marathonian bull, Polyphemus the noted cyclop from Sicily, who had a taste for human flesh, were among the number who accompanied Jason.

Their first halting-place was the island of Lemnos, where the lovely women had just killed all their husbands and fathers, and the Argonauts, like most modern prospectors, made themselves agreeable to the Lemnian widows, and stayed with them two years. Then they forged ahead to Mysia — wherever that was, and one Hylas, a splendid looking fellow, went ashore to draw water from a fountain. His manly beauty excited the love of a nymph, who drew him to the bottom of the well, where he was drowned, and changed into an echo. Hercules and Polyphemus went ashore and searched for him, and when they called to the youth the only answer was a faint echo from the bottom of the well. While they were pursuing the search the ship sailed away, leaving them behind.

When the Argonauts reached the country of the Bebryces, the king, who considered himself a sort of a John L. Sullivan, invited them to a fistic display of the manly art. Pollux was something of a thumper, and he accepted the king's challenge, and in the first round dealt him a blow that broke his neck. The Bebryces then rushed at Pollux, but the rest of the Argonauts took a hand in the fray, and after having killed a number of the natives and rescued Pollux, sailed away.

There are two small rocky islands at the entrance of the Bosphorus into the Euxine Sea. The story goes that in olden times these were floating islands, and called the Symplegades. On the approach of a vessel attempting to pass through, these islands rushed together and crushed it to pieces. The route of the Argonauts led through this strait. When near it they let loose a dove, the islands rushed together; but only some of the bird's tail feathers were caught. This was a good omen, and taking advantage of the rebound the Argonauts pulled through in safety, only losing a few stern ornaments of their ship.

In due time they reached the Colchian Kingdom, and the king offered to give up the Fleece if Jason would, single handed, yoke to a plow a couple of fire-breathing bulls with brazen hoofs, that he had, and sow the dragon's teeth left by Cadmus the founder of Thebes. Cadmus had been quite a character in his day. He slew the dragon that guarded the well of Mars, and sowed most of its teeth himself. Armed warriors sprang up as the crop and attacked him, but he managed to direct their arms against each other until they were nearly all slain. He left over some of the teeth in the grove of Mars, and these were what the Colchian king wanted Jason to sow.

A daughter of the king, Medea by name, looked with favor on Jason, and, upon his promising to take her as his wife, furnished him with secret means to overcome fire and resist steel, and how to kill the armed warriors that would spring up from the teeth when sown. He broke in the bulls, slaughtered the crop, and married Medea. She then gave him magic power to lull the dragon to sleep, and he secured the Golden Fleece. Taking his wife he set sail with the other Argonauts for home. Wind and weather were unfavorable to them, so they called on old Circe on the Island of *Ææa*, who told their fortunes and favored them with more favorable weather.

Their route now was taken towards the rock of Scylla in the straits of Messina, where the sirens dwelt, whose songs were so sweet and attractive as to draw navigators near the shore, where their vessels would be dashed to pieces against the rocks by rushing waves. But when the sirens began their songs to beguile the Argonauts, Orpheus cleared his throat and warbled so sweetly that the voices of the sirens were drowned, and they safely passed the treacherous place between Scylla and Charybdis. After some other minor adventures the Argonauts in due time arrived in Thessaly with the Golden Fleece, from their prospecting expedition.

As the gold-bearing mountains of distant Asia gradually disintegrated by the chemical agencies in the atmosphere, and tumbled down, forming soils in the gorges and ravines

below, the particles of free gold therein became liberated from the mother rock, and by reason of its density, sought a lower position; and when the rains fell and the floods came they were washed down the rushing currents of the streams, along with the accumulated detritus, into the valleys, and deposited wherever gravity overcame the momentum of the waters. One of the primitive methods of gathering gold was to carpet the beds of streams at favorable times and places, with sheep's pelts, the fleeces uppermost, which caught and retained the golden sands that were hurrying on to a lower level; and when the streams ran down to remove the pelts to vats or tanks containing water, and reversing the position of the fleeces, washed out the gold, which settled to the bottom, and was then secured. The fame of some of these fleeces is supposed to have been the foundation of the Argonautic legend about the Golden Fleece.

While little is to be found in the literature of Greece and Rome that gives much reliable information about the mines of antiquity, or the manner of treating and working ores, enough is known to assure us that water washing was the general process for separating gold from the materials in which it was found. Ores of copper, iron and silver were worked by the smelting process, and the metal was obtained by the application of heat. The remains of old smelters in various parts of the world were found by the legionaries of ancient Rome; and the cinders, charcoal and slag found in the vicinity left no reason to doubt the uses to which they had been put. Some of these were pits sunk on the sloping sides of hills with well burnt sides and bottoms, with apertures reaching from the bottoms horizontally to the surface. Many of these were found in the desert of Sinai, and credited to the Jews; while others that were found were credited to the Egyptians.

In later times known iron mines were worked in Palestine by skilled workmen. In the time of Alexander the Great, gold, silver, copper and iron were obtained in great abundance from Ethiopia. The inhabitants of Arabia had their

mines and minerals, when the Greeks worked the rich silver ores of Attica, and were gathering gold in Thrace. The Phœnicians of that and far earlier times obtained supplies of gold, copper and iron from Sardinia and other islands in the Mediterranean. In their palmy days Thessaly yielded gold, Epirus silver, and Bœotia iron. Before the dagger of Brutus had found a momentary resting place in Cæsar's heart, gold and silver mines were being worked in parts of Western Europe. The Sabines and Etrurians had many miners among them, and the northern tribes of Italy were successful placer miners.

The tribes of southern Gaul, and the inhabitants of Hispania mined and worked both the precious and baser metals as early as the Christian era. The Carthaginians of Northern Africa carried on mining when Hannibal was seeking to outgeneral Fabius Maximus. Long before Cæsar conquered Britain the descendants of the Kelts in Cornwall mined copper and tin, while their neighbors, the descendants of the Kymri in Wales mined copper and iron for the Phœnician markets. Tin was used by the latter, as by the aborigines of America, to harden copper, but where the latter obtained their supply of it is not certainly known.

The forests of Germany were peopled by silver miners long before Alaric the Goth with his hordes of rude warriors invaded cultivated Italy and sacked imperial Rome. He is said to have carried off immense treasures of silver and gold from that city; but while returning homeward sickened and died. His victorious followers fearing pursuit, made their prisoners turn a river from its bed, buried their chief with all the stolen treasures there, returned the stream to its former course, slew the prisoners of war who did the work, so that the Romans would not learn where the treasures were, and, lightened of this heavy load, moved on to their native woods with celerity.

It would prove tedious if not uninteresting to attempt any detailed account of mining operations in Europe since the victorious eagles of Rome were carried into Northern

Europe by its disciplined troops. The legions of the Cæsars went down finally before the Goths of Europe and the Vandals from Asia, and from the fifth until the fifteenth century, owing to social disturbances in Asia and Europe, the production of the precious metals did not keep pace with the loss.

It is estimated that at the close of the fifteenth century there was not to exceed £40,000,000 or about \$200,000,000 in existence in money in the commercial world. Most writers on finance place it at about £37,000,000 or \$165,000,000. But since Columbus planted the Cross on the Island of San Salvador, and took possession of the New World, in the name of Ferdinand and Isabella, the world's production of gold and silver, for commercial use, has increased.

True, the Genoese navigator, when he projected his scheme to sail around the world to the Archbishop of Seville, and afterwards to the Court of Ferdinand, did not represent it as a prospecting trip for gold. But later on in his contract with the Crown of Castile appears a stipulation that the needy navigator was to be entitled "to receive one-tenth of the net value of all pearls, precious stones, gold, silver, spices and merchandise obtained within the jurisdiction of his admiralty,"—the lands he might discover. No doubt he reveled in mid-day dreams at times of the "far-away Cathay" of Marco Polo, and conceived the possibility of reaching it on his proposed trip.

The Queen of Castile, more credulous than the King, pledged her jewels to raise and outfit one galleon and two caravels for Columbus. The crews were mainly composed of avaricious and unprincipled adventurers, who could be well spared from home. A physician to look after the health of the bodies, and two or three Franciscan friars to look after the health of their souls, joined the expedition. The natives who rushed to see the strangers who landed on their island wore golden ornaments, and the cupidity of the Spaniards was at once aroused. The natives were cajoled and forced to disclose where the gold was obtained, and

numbers of them were enslaved in the mines which they pointed out to the Spaniards, and treated with barbarous cruelty. The worst of these adventurers was Hernando Cortez, a man of ambitious and irregular life. Under Velasquez, the governor of Hispaniola, he obtained an official appointment that enabled him to work Indian slaves with such rigor that hundreds of them died in the mines from the toil they were forced to perform, and the cruelty and neglect bestowed upon them. That good man La Casas labored to mitigate their sufferings, while he was denouncing the wretched slavery imposed upon them.

In 1519, Cortez landed on the coast of Mexico, at what is now Vera Cruz, with a force of less than 600 Spaniards and about 300 Indians. To cut off all hope of return or mode of retreat he burnt his ships, and boldly pushed on to the city of Mexico. He captured by treachery, and made prisoners of, Montezuma the king, and some of his caciques. A price in gold was put upon their heads, but when paid they were not liberated.

A tradition was current that the Temple of the Sun and the Halls of the Montezumas for hundreds of years were literally lined with silver and filled with golden images and ornaments. This man, affecting Christian zeal to abolish idolatrous worship, held forth to the Mexicans the enormity of their religion, while robbing their temples and halls of all the gold and silver he could find in them. He finally died in solitude and abject neglect; but before doing so was the means of spreading the fame of the mines of Mexico throughout Europe.

Another unprincipled Spaniard, Francisco Pizzaro, was the means of making known the wealth of Peru. An illegitimate Estremadurean by birth, and a swindler by occupation, he was a man of remarkable courage and greed. With other adventurers he embarked at Seville for the New World, fought his way into notice by audacity, became an associate of Balboa, crossed the Isthmus of Panama and beheld the Pacific Ocean. He returned to Spain with the news of the rich Empire of Peru, and

returned with a *capitulacion* or commission from Charles V. to conquer it. With nominally a handful of men he undertook the task, in 1531, and at the head of 177 men marched to meet Atahualpa, the Inca, who had just achieved a great victory over his brother Huascar, and put him to death. The royal Peruvian met the Spaniard's advance in a cordial manner, and was soon in his power. He was the prisoner of the invader, and for some reason his troops fled. He offered to fill the room in which he was kept — 22 feet long, 17 feet wide and 9 feet high, with gold as a ransom for his release. What amounted to \$17,000,000 was delivered, and then the Inca was put to death. Not long after Pizzaro was assassinated by another Spaniard; but the fame of the great wealth of Peru was noised abroad.

These two avaricious ruffians, Cortez and Pizzaro, handled vast wealth by their repulsive treachery and cruelty, and retributive justice prevented either from enjoying the fruits of their robbery and spoliation.

The conclusion which is to be reached by a recital of these historical facts is that mining for gold and silver in Mexico, Central America, South America, the Bahamas and West Indian Islands was known to the natives of those countries and those places long centuries before Columbus was born. These metals had a superior attraction and value to the inhabitants of the Western Hemisphere over the baser ones, just as they had in the Eastern one. It was no royal road to learning that taught them their value, and it cannot be fairly credited to any evolution theory. But the stubborn fact is before us: That the knowledge and use of the precious metals in both hemispheres is nearly, if not quite, co-existent, with man. And the miner certainly preceded the working of metals in both.

Small quantities of gold were, and still are, obtained in Cornwall, in Wales, and in the Wicklow mountains in Ireland. Auriferous deposits are found in and along the various rivers of Central Europe — as the Rhine, the Rhone, the Reuss, the Danube and the Aar, but are too

poor to encourage extensive working. In the Pyrenees in Spain as well as in the Alps of Italy and Switzerland, quartz mining is a permanent industry. In Austria, Hungary, Slavonia, Russia, and in some other parts of Europe, quartz mining is carried on profitably to those engaged in it, although the yield of metal only ranges from six to fifteen parts in a million.

Prof. A. J. Bowie, the former superintendent and manager of the DeSmet mines near Deadwood, stated frequently in 1880 that he saw the largest quartz mills in the world in Transylvania some twenty years before, and that in some of the mining towns, the inhabitants, men, women and children, were in one way or another, engaged in mining. Toddling infants were brought up to learn the difference in rocks, and became ore sorters at a tender age. The light work was done wholly by women and children. Yet the total amount produced from the gold mines of Europe — Russia excepted — is small. The total annual product of Austria is less than 6,000 ounces; of Italy much less; of Spain rather more than Austria, because of some newly discovered mines operated by English enterprise and capital. Russia yields about \$15,000,000 a year, which entitles her to take rank next to California as a producer of gold.

Gold is being constantly produced now in Australia proper, in New Zealand, New South Wales, in Borneo, in Sumatra, in Ceylon, in the Phillipine Islands, in Japan, in Thibet, as well as on the American continent in thousands of places from Alaska to Patagonia. Africa too is giving up its golden wealth. The mines of South Africa are quite productive. Valuable mines of recent discovery are reported from the country of the warlike Caffirs of Central Africa. Everywhere is it used for ornamentation as well as a measure of values. Its existence is universal, and its distribution is more general than any other metal.

But gold and silver do not endure, more than the rocks which encase them. The slow but constant process that is gradually leveling the mountains and filling the valleys in the ocean's bed with the debris brought down by the snows

and rains of heaven may be imperceptible to short-lived men. So too the imperceptible wear of gold and silver coins, ornaments and vessels, may not be noticed, but it goes on. The Bank of England to-day, no matter how recent the coinage, will not receive in payment or on deposit any considerable sum in gold until it has first been weighed, and the standard amount of money in it by weight calculated. It is then counted by pieces, and if the count tallies with the weight it is swept off the counter into the bins below. But if the two calculations show that there has been loss by erosion, the difference must be made good, or the coin will not be received.

The loss by the various agencies of destruction in the precious metals from century to century has been on an average nearly commensurate with its production. The sea has swallowed vast accumulations of it that it will never give up until its waters run dry. Beneath desert sands, caravans laden with vast fortunes lie hopelessly buried. Earthquakes innumerable have engulfed gold and silver accumulations beyond calculation. No inconsiderable amounts have been hidden away or buried out of sight and forgotten. Misers, pirates and robbers have concealed wealth that will remain concealed until the sea gives up its dead. The arts in various ways have absorbed other vast quantities of gold and silver, that have never returned to paths of commerce, to measure values again.

At one time in European history, probably the 13th century, the growing scarcity of gold and silver was noticed with concern. Certain learned men tried to provide a remedy for the disappearing metals. They were called alchemists; and they advanced the theory that the baser metals could be transmuted into gold. Experiments were made for more than two centuries, without success in the object sought to be attained, but not without success in other directions. The school of alchemy produced the school of chemistry, and the discovery of America produced what the alchemist did not — a full supply of precious metals for man's use.

It is estimated by competent persons that the mines of this Continent have given up since its discovery by Columbus three and a half to four times as much gold and fifteen times as much silver as all the known world besides. Its effect has been to reduce their purchasing value somewhat.

As heretofore stated, gold is the most widely distributed metal in nature. According to Sonstadt and Dana it is present in the sea waters. A ton of sea water will yield a grain of gold. Silver is always associated with gold in a less or greater percentage. This recital does not imply that mining is carried on in sea water.

Occasionally a miner has been rewarded for his persevering toil in finding a large nugget of gold. In 1810 a nugget was found in a placer mine in Cabbaras County, N. C., that weighed 37 pounds troy. In one of the southern mining districts of the Ural mountains called Zlatoust, a nugget weighing 96 pounds troy was found in 1842, which is kept in the Imperial School of Mines at St. Petersburg. A number of large specimen nuggets, placer and quartz, have been found in California at different times since 1849. But the largest known nuggets of modern times were the "Welcome Stranger" and the "Welcome," both found in Australia in 1864. The first one weighed 2280 ounces, and was so fine that it yielded after melting 2268 ounces. It came from the Dunnaly, District of Victoria. The second one was from Ballyrut, same district, weighing 2217 ounces when found, and yielded after melting 2166 ounces. These last two were on exhibition at the Paris Exposition in 1867, and exact models of them are preserved in the Kensington Museum in London.

It is reported that a still larger nugget has been found in Australia, that was called "Sarah Sands" and that weighed 233 pounds and 4 ounces troy. Our Nigger Hill and Potato Gulch in the Rawlins Mining District, Lawrence County, yielded a large number of small nuggets in 1876, 1877 and 1878, which were on exhibition in the windows of the Deadwood banks in those years. Numbers of them weighed two, three, four, and more ounces. One large

one was exposed in the bank of Brown & Thum in the fall of 1877, which was valued at \$130.00, reckoning at \$17.00 per ounce.

Whether gold and silver can be superseded as money by any other metal or device for any considerable time lacks complete demonstration. Temporary shifts have been resorted to in emergencies, at different times in the different countries, but the results were not in accordance with the expectations of those who from choice or necessity made the experiment. Lysurgus to curb the spirit of avarice banished gold and silver from Sparta, and made iron a legal tender as well as a medium of exchange. He died, and his reform perished with him.

Some of the Italian republics in times of great pressure, and when the public coffers were comparatively empty, and money for public purposes was sorely needed, issued bills of credit as a substitute, which always declined in value, until changed public situation insured their speedy redemption in coin. In this country in Revolutionary days Continental promises to pay were issued to the patriots who fought for American independence in payment for their services, but they declined so rapidly that in twenty years after the close of the war one dollar in gold would readily exchange for \$400.00 in this Continental currency.

Within the last thirty years this country has witnessed the fluctuation in a paper currency. As a war measure paper "promises to pay" at some day in the future were issued on the national credit, and were by law made legal tender in payment of debts, but when American ships were being swept from the seas, and American commerce was being destroyed by rebel cruisers, the value of the national currency feverishly diminished until a gold or silver dollar was equal to \$2.83 of the paper. England, France and Russia have experimented in making paper currency a substitute for metallic money; but with this result only, that the paper "promise to pay" on a future day, is only of equal value with the precious metal currency when the holder can exchange it instantaneously for gold and silver.

When the nation, the banker or the trader wishes to use its or his credit to carry on its or his affairs with any kind of evidence to pay a sum certain at a future time to the holder, its or his ability to pay in coin is the test. So long as the promise can be fulfilled to the last farthing the promise is looked upon as good.

Whenever the paper currency of a country that is being experimented with as money fails to command gold or silver in exchange it suddenly depreciates. National credit, individual or corporate credit, whether backed by patriotism on the one hand or enforced by duress on the other, have been proven by experience to be unstable and unsatisfactory substitutes in the commercial world for hard money. Gold and silver are the world's currency, and hence mining for these will be always carried on and encouraged while the spirit of commerce lives.

LECTURE II.

PUBLIC POLICY OF GOVERNMENTS IN RELATION TO MINING, PARTICULARLY OF THE PRECIOUS METALS.

So far as historically known, governments, generally, have, in one way or another, encouraged the production of precious metals. Some few exceptions there were, which will be noticed later on. The necessity of having some one or more things, which had inherent value in itself, that could be readily exchanged for other productions, and that other productions could be exchanged for, must have been apparent in society soon after its formation. It is agreed that the patriarchal was the earliest form of society, and that contributions of men, of provisions, of the implements of war, of clothing, etc., were made for the purposes of attack or defense. But remuneration was to be obtained mainly by conquest and spoil. In due time it was found more convenient for the patriarch of the family, the clan

or the tribe, to levy a tribute on the members. If the tribute was all paid in oxen or horses there would be a surplus of these. Besides these needed care and attention or many would perish; if in cloth, or grain, or flour there were incumbrances beyond actual needs. So, something of small compass, that could be readily carried or exchanged for commodities needed became necessary. But that something was required to possess the attribute of acceptability to those to whom it was to be tendered. Many dissimilar substances have been made to perform the functions of money by compulsory laws, which bore the impress or stamp of the reigning authority; to counterfeit which was punishable as a grave crime, and to refuse to accept it as money was a graver one. In ancient Greece and Rome cattle were made use of as money. In Plutarch's lives there is an interesting account of how Lycurgus, the lawgiver, to exterminate the love of riches which had taken a fast hold on the Spartans, stopped the currency of gold and silver coin and ordered that iron money should be used instead. This money became unpopular, because of its great weight and bulk. What would be the equivalent of one hundred and fifty dollars in this money would require a yoke of oxen to draw, and a room to hold it. This was not pleasing to the rich, but Plutarch says it had a tendency to repress corruption, as, "Who would steal or take a bribe, who would defraud or rob, when he could neither be dignified by the possession of it, nor if it was cut in pieces be served by its use?"

It is said that the Byzantines and the people of Plazomanæ also used iron money.

The tyrant Dionysius of Syracuse coined money from tin; so did the Romans and the Britons of Cornwall. In some countries a leaden coin was used; and leaden money is now in use in the Burmah empire. Platinum was coined as money in Russia from 1828 until 1845. Its greater value than gold in some of the arts caused its discontinuance. Platinum was found more plentifully in the Ural mountains than anywhere else during this century. The

Carthaginians, Frederick Barbarossa, the famous emperor of Germany, and John the Good of France, issued leather money; and under William I of Sicily the people were obliged to surrender their gold and silver in exchange for this kind of money. About 700 B. C., Numa Pompilius, King of Rome, made money out of both wood and leather. Marco Polo found money in use in China in the fourteenth century made from the middle bark of the mulberry, which it was death to counterfeit, and death to refuse. Lands and slaves were used as money under the Cæsars, and also in Britain before the Norman conquest. The slaves were usually transferred with the lands.

Mungo Park, a great traveler of the last century, found an African tribe who, in their commercial intercourse with Europeans, desired iron in exchange for their commodities rather than gold and silver, on account of its usefulness in making implements of war. The South Sea Islanders, as well as the aborigines of America, traded for beads, brass wire, hatchets and other implements of iron, and among themselves these passed as money. So we might continue for an indefinite length, to show that among different nations, at different times, other materials besides the precious metals, were used as money. This arose from necessity often, or from some fanciful theory like that of Lycurgus, or of the Chinese, where bronze money is the order of the day now.

Bronze and copper coin, as well as of gold and silver, are of very great antiquity. But before coins were struck gold and silver, and perhaps the other metals, passed by weight. The origin of metallic money was in the cradle of creation — Asia. There was a tendency implanted in man to accumulate these metals in the primitive ages; and as all men seemed to value them, those in authority collected tribute and taxes in that form. They soon had an exchangeable value, measured at first (most probably) by weight. Soon their use was found indispensable in the department of national life, and they became, and have always remained, generally speaking, a circulating medium. No other metal, material

or contrivance, possesses the universal acceptability of gold and silver.

Until recent years the earliest coinage was ascribed to the Lydians of a date supposed to be about 1200 B. C., but it is now fairly certain that coins were struck by public authority in Egypt and other countries of the East that exist in ruins long prior to that date.

Reverting now to the times that the pages of history record some of the events of the human race, governments and those in authority in national affairs, encouraged the production and accumulation of gold and silver. It was found necessary to build cities, maintain public works, equip and sustain the wonderful armies that made the earth tremble beneath their tread. True, prisoners of war and slaves were compelled to do most of the laborious and menial work in the mighty capitals of the past, yet the conquerors had orgies and games and pagan displays that necessitated the use of gold and silver. The Romans, we know to a moral certainty, sent Jewish prisoners of war to work in the mines of Spain. The Athenians condemned numbers of their prisoners to the silver mines of Attica, much the same as the Russian government now condemns its political prisoners and its prisoners of State to the mines of Siberia. Many other governments, no doubt, older than Greece or Rome, had the same bad habit. To the unfortunate captives the mine was a prison, where they wrought out their existence to obtain gold or silver for their heartless captors. Not all the captives were condemned to the mines, The quarries took their quota. The building of roads required other vast numbers. Some ancient as well as most modern governments while encouraging mining by private individuals exacted a proportion of the precious metals produced as a royalty. By a fiction the King was the owner or supposed owner of the minerals in the ground. The noble metals of right belonged — according to royal reasoning — to noble persons, and who so noble as the King!

If one not the owner of the land made a discovery of

mineral therein he was entitled, under certain restrictions, to enter and sink his pit, or what we denominate a discovery shaft. For this purpose he could obtain the authority of the sovereign under the name of permission.

Ordinarily it has been considered a matter of so much social interest by governments, that mines should be discovered and worked for the metals, that the indolence of the proprietor of the ground or his want of means to prosecute mining would not be permitted to deprive or retard the community's enjoyment of the subterranean riches found therein. Some measure of compensation, however, was usually awarded the land owner by the officer of mines for any inconvenience that he might be put to. Agricultural lands, vineyards, and pastoral stretches of country were subject to be thus entered upon by a stranger; but walled inclosures, courts, gardens and the like, near the party's dwelling or domicile were exempt from such invasions. In Spain and in most Spanish speaking countries a distinct tribunal exists known as the Court of Mines, which settles all disputes relating to trespasses by prospectors or miners on the lands of another. The principle in such cases is: The mine or vein is no part of the individual's estate, and did not pass with the grant of the land; and the discoverer of a mine takes precedence over the owner.

These and similar notions elsewhere, proceeded upon the assumption that it is a public advantage that ores should be searched for and mines worked by the people generally; and that the owner of the soil has no right to prohibit any one from making known the minerals of the Crown for public use.

No substitute for gold and silver money will live long when it shall fail to command gold or silver for its redemption. It is of the essence of money that it is capable of making immediate payment to a vendor for what he sells, and satisfy a creditor for what is due him. As has been shown, something may be money in one state, realm or kingdom for a short time, and answer for local ends, but the world's commerce as well as the universal judgment of

men requires a something for money that has an actual value in itself, and is not merely a representation of value: a something that does not lose its value if its form changes. Where money is itself a value it has a universal credit. An English writer illustrates this matter thus: "If a dealer sells a hat for a sovereign he knows that the sovereign does not depend, like a pound note, on the solvency of the issuer, but that it has got value put into it by costing about as much labor and skill in bringing it into existence as the hat he gives for it."

We conclude that public policy in nearly all countries encourages — in one way or another — the production of the precious metals, as benefiting the people in the various enterprises of life; and that it is so wisely ordered, in human affairs, that no overproduction occurs, although it has sometimes happened that rich discoveries and an increased output has disturbed the relative values of gold and silver temporarily, but whenever such was the case industry was stimulated and the energies of the commercial world grew more active.

By the civil law all veins and mineral deposits of gold or silver, or of precious stones, belonged to the patrimony of the Crown; but, if upon private property, the owner, if the discoverer, might work them, rendering to the King one-tenth of the gross yield; or if a stranger discovered the mineral wealth, he could work it, yielding one-tenth to the King and another tenth to the owner of the land. If upon public land, the discoverer was required, after deducting all the expense and cost attendant on mining and smelting, to pay a proportion to the Crown. This became and was the established custom in Spain, Germany, the Electorates, Portugal and France. The reasons for this custom are stated by Cardinal De Lucca, an authority on mining in Spain, that metals of the first class (gold and silver) "are proper for forming money which it is essential for sovereigns to be provided with, in order to support their warlike armaments by sea and land, to provide for the public necessities, and to maintain the good government of their

dominions.” This mining tribute or royalty is paid everywhere except in the United States. And everywhere except in our own country, there are officers of mines, who look after the collection for the State, keep an official account of the production, and make an annual official report each year, and enforce statutory local rules and regulations in their respective districts.

In the Spanish and Mexican law a court is provided called the “Royal Tribunal General of the Mines.” It is composed of an Administrator General, a Director General, and three Deputies General, to whom all matters in dispute relating to mines and the working of the same are referred. Each of these judges is required to be an intelligent practical mine owner, of not less than ten years experience in operating mines. Each also is, or rather was, required to be of Spanish blood (unmixed), sons and descendants of ancient Christians, and born in lawful matrimony.

This tribunal had the power to fix a table of wages which the miners were to receive, and it was a punishable offense for mine owners to agree to pay less. They visited and inspected the mines, and if deemed unsafe they could so declare, and order them put in a condition of safety without delay, which order had to be complied with under a penalty.

All proceedings were directed to be conducted between parties before it “in the shortest and most summary manner, according to justice, and the customary good faith of commercial transactions, without the usual delays and written declarations or petitions of lawyers.” This tribunal was directed “not to allow any complaint or proceedings to be presented in writing until they should have cited before them both parties — when it was practicable to do so, and hear orally their several causes of actions, and replies or objections, and first endeavor to compromise and settle the matter in dispute between parties, with the utmost possible dispatch.” Should the tribunal fail in its first effort, and the amount in dispute exceed \$200.00 in value,

then the lawyers could get a chance to come in with long written petitions and answers, and prolong the controversy in the same way as is now done under our improved system of jurisprudence in the Black Hills.

If the matter in dispute did not exceed in value \$200, it was summarily decided, and no appeal was allowed.

In all cases of dispute as to who was the discoverer of a vein, he was considered such who first found metal therein, notwithstanding others might have made openings previously.

No mine in dispute was for any reason allowed to be shut up, or, as we say, closed down; or its workings suspended *even at the request of the parties interested*; but an "interventor" was appointed to continue the operations during the controversy, and when that was at an end render a strict account of his stewardship of the mine. The working miners were not thrown out of employment by these disputes.

When necessary to carry into effect an execution against any mine or reduction works the same were not allowed to be sequestered or put up for sale, "nor yet the machines, iron work, or tools, implements, slaves, cattle, buildings, materials or any of the necessary stores or provisions; but such execution shall (was) only be put in force with regard to the gold and silver ores and other produce of the mine, after deducting what may be (was) necessary to meet the expenses of carrying on the works, which are (were) by no means to be interrupted."

The exemption of certain property from seizure under legal process for the satisfaction of a debt was not unknown in the Spanish and Mexican enactments for mining.

Section V. of Chapter XIX of the "Royal Ordinances for the Direction, Regulation and Government of the Mines of New Spain and of its Royal Tribunal General" provides as follows:—

"If an execution be levied upon other property of a mine owner, there shall be reserved to him a horse, with bridle and saddle, a baggage mule, his arms, bed and the

clothes commonly used by himself, his wife and children, and absolutely necessary to their decent appearance; but all costly dresses, ornaments, jewels or trinkets may be seized under the execution."

Mine owners, superintendents and other persons serving in the mines were not liable to be arrested for debt so long as such person remained within the mine or establishment connected therewith; and only a third part of the wages of an employe could be garnisheed in the hands of the mine owner at any one time.

If the mine was sequestered to pay the debts of the owner, in addition to first paying the expenses of the mine in the hands of the "Interventor" and under his management, the owner might receive out of the product what was absolutely requisite for his support according to the circumstances of his family and condition.

Deserving persons belonging to the mining profession, who had quitted it on account of having consumed their capital therein, or who were too old or too infirm to pursue it, were specially recommended if otherwise worthy of being appointed to the office of judges in the mining district, whenever it should appear expedient so to do.

The X and XI sections of this chapter are well worthy of being quoted at the close of this lecture, to illustrate the spirit of paternal concern that pervaded these Spanish laws.

SECTION X.

The excessive profusion of miners in the employment of their capital, and their extreme imprudence and irregularity, whereby themselves and their families are speedily reduced to distress, and their capital is diverted from the operation into other channels, being as notorious as they are destructive; I will and ordain that the judges and deputies of the Mine-Towns and Districts shall advise thereupon, and in cases of necessity expostulate with the miners, particularly with those who are in prosperous circumstances, cautioning them against extravagant expense or

idle profusion ; and if this should be found inefficient, then that they shall make a report to the Royal Tribunal General of Mines, in order that the latter, after satisfying themselves of the reprehensible conduct of the miner, concerning whom such report is made, may appoint a person to watch over his interests, or in some other manner provide for the preservation of his property, as in the case of an incorrigible spendthrift.

SECTION XI.

In order to avoid the evil and injury, spiritual as well as temporal, occasioned by games of chance and hazard, and even by those which are permitted, when carried to excess, and also by other public diversions and festivities ; I prohibit most rigorously, in all Mine-Towns and Districts among masters as well as workmen, all those games at cards which have before been prohibited by Royal Edicts and Decrees, and also all playing at those games which are permitted, for a larger stake than is compatible with fair and moderate relaxation and amusement. And with equal rigor I prohibit all playing at dice or tubas, and also cock-fighting, and all other shameful diversions, since they not only occasion the loss of time which might be devoted to labor, but lead to vast loss of property, and sometimes even occasion outrages and murders. Therefore, I strictly enjoin judges and deputies of Mine-towns and Districts to enforce with the utmost vigilance the provisions of this present section, on pain of being themselves wholly responsible for the neglect of the same, and of being liable to the penalties imposed by the said Royal Edicts and Decrees against all transgressors.

The reasons for the enactments of Spanish laws are generally given, either at the beginning or in the body of the decree, thus:—

“ Inasmuch as the discovery, occupation and working of the mine adds so much to the prosperity and increase of these Kingdoms and those of the Indies, we charge and com-

mand the Viceroy, Presidents, Governors and Alcaldes (Mayors), that they bestow very particular attention in observing and having observed the orders which have been given or may be given in relation to the personal services of the Indians in those cases where by the law of this book it is permitted.”

LECTURE III.

PUBLIC POLICY IN RELATION TO GOLD AND SILVER MINING IN THE UNITED STATES.

Until of recent years the public policy of this government was not different from that of most European ones, in holding that to the sovereign belonged the nobler metals in the soil. The first territory ceded to the Government was by Virginia in 1784, and by Massachusetts and Connecticut in 1785-6, which finally took a more perfect form in the celebrated Ordinance of 1787, by which all the territory northwest of the Ohio river, north to the great lakes, and westerly to the center of the main channel of the Mississippi river, was ceded to and became the property of the United States. In establishing a system for the disposal of lands northwest of the Ohio river, Congress, that is, the Continental Congress, on May 20th, 1785, reserved “one-third part of all gold, silver, lead and copper mines, to be sold or otherwise disposed of as Congress shall hereafter direct,” and in the form of patent adopted evidencing the Government grant, the following reservation occurred: “excepting and reserving one-third part of all gold, silver, lead and copper mines within the same, for future sale or disposition.”

This territory now comprises the States of Ohio, Indiana, Illinois, Michigan and Wisconsin. The silver and copper mines of northern Michigan and northern Wisconsin along the rude and rocky shore of Lake Superior had long been

known. Early in the 17th century, and before the Pilgrim Fathers had sighted the then inhospitable coast of Massachusetts Bay, the shores of the great lake, called Superior, from its size, were being trodden and explored by French Jesuits, and their great wealth in copper and silver determined. Whatever else these intrepid and brave missionaries sought in the New World, it is absolutely certain it was not the amassing of metallic wealth. But famed as they are, and have been since the days of Loyola for deep patristic and theological learning, credited by governments with great power of intrigue and undue zeal to accomplish their purposes, their seats of learning have always been sought as fountains from which careful and profound scientific knowledge could be obtained. Among them are and have been men eminent as astronomers, botanists, mineralogists, metallurgists and geologists. Careful observations were made by these early missionaries of the lakes and rivers that they met, of the mountains, woods and plains that they saw, of the minerals they found, as well as of the vegetation they passed through; and maps and reports of these, carefully prepared, were transmitted to their superiors in France. Parkman gives an interesting account of these early explorers in his "Early Jesuits in North America." Fifty years later Rene Mesnard visited the Lake Superior region, explored its mineral resources for a couple of years, and then wrote an account of the discoveries made by him. He was followed by Allouez, Marquette, Dablon and other Jesuits, who, zealous to make converts to Christianity of the Indians, did not neglect to make full reports of the vegetable and mineral resources of those parts of the Lake Superior region that they happened to visit.

An adventurous French explorer named Charlevoix, or De Charlevoix, visited this interesting copper region about 1721, and wrote an account of his voyage and discoveries, which later on induced an English company to mine for copper near the mouth of Ontanagon river, six years before the Declaration of Independence was signed.

The lead mines in southwestern Wisconsin were discovered by LeSeur in 1700.

In many places on the Michigan Peninsula the remains of ancient mines and mining tools have been found. Also various articles of pottery, such as urns, vases, drinking cups, etc., made by a people comparatively well civilized. The mining tools were of copper alloyed with tin, and corresponded with some of those found in Mexico by the early Spanish invaders. The remains, or supposed remains, of smelting furnaces have also been found there. Tin has the property of hardening copper when associated with it in proper proportions.

In 1790 North Carolina ceded the territory west of the Alleghany mountains, which now comprises the State of Tennessee, to the United States; and in 1802 Georgia ceded to it the territory now comprised in the States of Alabama and Mississippi.

Gold mines were worked in North Carolina near the beginning of this century, and extended over quite a large area of country where the Blue Ridge and Alleghany ranges traverse it. From the mines of this State, since the establishment of the U. S. mint, there was deposited for coinage upwards of \$10,000,000 down to 1874. These mines are not very productive of late years. In different parts of its mountain region are ancient mines of unknown date and origin — but supposed to be of Spanish origin.

In 1829 gold was discovered in Habersham County, Georgia, and in nine years succeeding yielded (estimated) 800,000 ounces; during the succeeding eleven years (1838–1849), the yield did not exceed 200,000 ounces; while the yield for 1870 was only valued at \$29,780. These mines are not very productive of late years.

In 1803 the Louisiana purchase was made by President Jefferson from France, by which all the territory west of the center of the main channel of the Mississippi river and east of what was claimed by Spain was ceded to the United States. This vast area now includes Arkansas, Missouri, the Indian Territory, Colorado, Nebraska, Iowa,

Minnesota, Dakota, Montana, Washington Territory, State of Oregon, Idaho and nearly all of Wyoming, besides the State of Louisiana, and the purchase price was \$15,000,000.

The first authoritative announcement of this Government's policy in relation to mines on the public lands was made by the United States Supreme Court in 1840. Congress passed an Act in 1807 authorizing the leasing of lead mines on Government lands. In 1834 one Maj. T. C. Legate, of the army, but acting as United States Superintendent of lead mines, leased lead mines on the upper Mississippi near the present town of Galena in the State of Illinois, to J. P. B. Gratiot and Robert Burton, for one year. The lessees were to pay for the privilege in kind, that is: six pounds out of every hundred pounds smelted, "in clear pure lead," payments to be made monthly at the wareroom on Fever river. A bond was given by the lessees for the faithful performance of their part of the agreement. For some reason the lessees did not perform, and an action was brought on the bond in the Circuit Court for the State of Illinois, and appealed to the U. S. Supreme Court. It is known as *United States v. Gratiot*, and may be found in 14 Peters, 526.

The defendants demurred to the declaration, and made the point that Congress had no power to lease its lands.

The Supreme Court held that under the constitutional provision "That Congress shall have power to dispose of, and make all needful rules and regulations respecting the territory or other property belonging to the United States" it had the power to lease the mines; that the word "territory" as there used is merely descriptive of one kind of property, and is the equivalent of the word "land," and the power to dispose of it includes the power to sell it or to lease it.

The court further declared: "It has been the policy of this Government at all times, in disposing of the public lands, to reserve the mines for the *use* of the United States. And their real value can not be ascertained without caus-

ing them to be explored and worked under proper regulations.”

On the 4th of September, 1844, the general and permanent pre-emption law passed by Congress was approved, providing for the distribution of the proceeds of the sales of public lands, and granting to settlers who were citizens, or who had declared their intention to become such, certain pre-emption rights on the public lands; but “all lands on which are situated any known salines or mines” were excepted from the operation of the act.

So, too, the Homestead law of 1862 is confined in its scope and operations to lands subject to pre-emption, which we have seen can not operate on known saline or mineral lands.

In all grants to railroad companies by Congress express reservation is made of lands containing minerals. The sixteenth and thirty-sixth sections in each governmental township, ordinarily granted by Congress for school purposes, to each newly admitted State, will not apply to sections containing valuable minerals.

The same is true of lands granted, from time to time, to certain States, including what are known or called swamp or overflowed lands.

It is common to associate the year 1847 with the discovery of gold in California, and to credit the discovery to Col. Sutter, to Fremont, or to Sam Brannan and a few Mormons. This is not historically correct. Gold was found in many places in the southern part of California in the 17th and 18th centuries by explorers from Spain and Mexico, and the country was known for fully two centuries before 1847 to be auriferous. Spanish avarice and cruelty did much during the latter part of the last and the early part of this century to discourage mining. The indolence of the natives and jealousy did the rest. The war of independence by Mexico with Spain gave adventurers at home all the excitement they needed for some years, and all the troops and most of the officials were withdrawn from California to Mexico.

Don Miguel Hidalgo, a priest of Guanajuato, led a revolt in September, 1810, against Spain and in favor of Mexican independence. He is represented as a man of considerable talent, and of great influence among the native Mexicans or Indians. At one time he was reported to have gathered as many as 100,000 men. But he suffered a series of defeats, was betrayed, captured and shot by the Spanish troops.

Another priest named Morelas continued the conflict as leader, called a national congress, which promulgated a constitution and declared Mexico independent. He, too, was defeated in several battles, taken prisoner, carried to the city of Mexico, and there shot. Other leaders sprang forward to fill the place made vacant by their predecessors' execution, and the country was in a round of agitation until one Iturbide, a native Indian, but a colonel in the Spanish army, revolted, and led the revolutionists to victory. He had himself proclaimed Emperor, but Santa Anna and other Mexicans made life a burden to him. The country was in a state of great disorder. Confiscations followed fast on each other. The churches and religious houses were first plundered of their wealth, and mines were robbed, and then the lands and buildings seized and condemned for public use. War was made on the religious orders, male and female, and they were expelled the territory, and their property confiscated.

These examples were not without effect on the followers of the leaders. Insubordination and conscienceless robberies were the order of the times, and all patriotic Mexicans considered these as acquisitions of a high order, especially if accompanied with treachery. Mining therefore was practically discouraged and at a standstill until the revolution had run its race, and the Republic had attained a sort of stability. The United States acknowledged its independence in 1829. Spain made an attempt to regain its foothold in Mexico the same year, but failed. By 1835 Santa Anna had become Dictator, and all parts of Mexico, which then included California — except Texas, was subject to him.

In 1844 Manuel Castanares was the representative from the department of the Upper and Lower California, in the Mexican Congress. He made reports of the condition of the country, which were printed in the city of Mexico in 1845, from which the following extracts are taken: —

“ The gold placers discovered in the course of last year, have attracted the greatest attention, for they extend nearly thirty leagues. The good quality of this is made manifest by the certificate of assay which was made at the mint of this capital, and by the sample which I send to your Excellency. In order to develop the great elements of wealth in which California abounds measures ought to be taken only after mature deliberation. I shall, therefore, have the honor, within a few days, of presenting to your Excellency a memorandum detailing these elements and the means of developing them with very little sacrifice.

“ Mexico, March 2nd, 1844.

“ The mining interest in California is of great importance, and I have the satisfaction of assuring you that it forms one of the most valuable resources of that department. Besides the silver mines which are found there, and various other mines which have actually yielded metals, the gold placer especially is worthy of great attention, which, extending nearly thirty leagues, was discovered lately, together with mines of mineral coal. It is painful for me to have to confess that mining is in a worse state than agriculture; the latter is in its infancy, the former it can be said is not yet born, notwithstanding that, according to the nearest estimate of reliable persons in Los Angeles on my departure from that town in December, 1843, there were in circulation about two thousand ounces of gold which had been extracted from the above mentioned placer, the greater part of which is destined to go to the United States. This metal contains according to the certificate of its assay by the mint of this capital, which I sent to the Government at the beginning of this year, twenty-two carats, two and a half grains of gold and fifteen grains of silver.

“ September 1st, 1844.”

After the Mexican war California was ceded to the United States. The discoveries of 1847, while not the first, were by far the most important gold discoveries made in California. Following close upon the war with Mexico, and the cession of all the country now comprised in the States of California, Nevada, Colorado, Utah, Arizona and New Mexico, to the United States by the Mexican treaty, they were believed in by large numbers of those who comprised the United States army during active hostilities in Mexico, and who had returned to the States. The news operated on these like a charm, and upon thousands of others; to direct them by land and sea to the new El Dorado. The overland route from the Missouri, up the valley of the Platte, by the South Pass of the Rocky Mountains, the northern end of Great Salt Lake and down the valley of the Humboldt to the Sierras, so long the trail of the trapper and fur trader, was soon teeming with gold hunters, striving to reach the golden slope of the Pacific; while sails innumerable were spread to the breezes of heaven that wafted ships southward to the tropics on the bosom of the Atlantic to and around Cape Horn to the Pacific, freighted with daring adventurers, who sought the wealth reported so easy to obtain in the new discoveries. Mexico, Peru, Chili, and other States of Spanish America contributed their quota of gold seekers. Convicted and unconvicted felons shipped from the British Isles to Van Dieman's Land, Kanakas from the Sandwich Islands, John Chinaman from the Chinese Empire, and Japs from Japan, streamed in on our shores and joined in the search. Europe sent its tens of thousands direct by ship to San Francisco, to join in the throng that was pushing discoveries to the summit, and finally across the Sierra Nevadas.

The gold region was overrun. The land which it had been the policy of the Government theretofore to reserve from sale, was taken possession of by citizens and aliens alike, and its hidden wealth exposed and appropriated by the newcomers without an express license from the true owner.

A curious fact is this: For seventeen or eighteen years

after the first rush of gold-seekers to California the Government took no steps to assert the doctrine laid down by the United States Supreme Court in the case *United States v. Gratiot*, in 1840, that the mines were reserved for the use of the Government. It merely looked on, and saw the people of every race and clime upturning the soil and boring the mountains in the eager race for riches, and its silence and inaction was construed by the courts into an implied consent and approval of the actual state of mining industry. In 1866 it gave its formal permission to citizens of the United States, and those who had declared their intention to become such, to explore the public domain for valuable mineral deposits. While thus reticent with regard to the right of its own citizens the Government in 1852 made a treaty with Peru; and in the XIX. Article of the same it was provided that: "Peruvian citizens shall enjoy the same privileges in frequenting the mines, and digging or working for gold upon the public lands situated in the State of California as are, or may be hereafter, accorded by the United States to the citizens or subjects of the most favored nations." (10 Stat. at Large U. S. 932.)

The privilege of mining on the public lands of the United States was not extended by the Government to its own citizens by the strict letter of the law until fourteen years after this treaty. But mining was carried on just the same. And so great was the glut of gold in 1851 and 1852, and the prodigal recklessness of the miners with their wealth, that it is stated as a fact that the gambling tables of San Francisco and Sacramento groaned in public under a greater weight and display of wealth, thrice over, than the vaults of the banking houses of these two cities contained in those days.

These discoveries in California made it imperative on the part of the Government after a time to take notice of the situation. The Secretary of the Interior under President Taylor in 1849 was Mr. Ewing of Ohio. He recommended in his annual report of that year the sale and lease of the mines. The President in his message to Congress in December of that year recommended the establishment of

a mint in California, which he said would afford facilities to those engaged in mining, as well as to the Government, in the disposition of the mineral lands. He further said: "In order that the situation and character of the principal mineral deposits in California may be ascertained I recommend that a geological and mineralogical exploration be connected with the linear surveys, and that the mineral lands be divided into small lots suitable for mining, and be disposed of, by sale or lease, so as to give our citizens an opportunity of procuring a permanent right of property in the soil. This would seem to be as important to the success of mining as of agricultural pursuit."

Mr. Ewing proposed an elaborate and complicated system for the disposition of the mineral lands containing placer deposits, which evidently favored the working miner, and would keep out large capitalists. He also recommended that: "The gold in the mine, and after it is gathered, until brought into the mint, should be and remain the property of the United States."

These recommendations found no favor with Congress.

California was admitted into the Union in 1850 as a State, and General Fremont was one of its senators. That year he introduced a bill in the Senate of the United States for the government of the mines. It was a condensation of the Spanish and Mexican laws for a space of three hundred years, that he deemed applicable. The bill, though frequently discussed, did not become a law, and no national legislation was had on the subject until February 27th, 1865, when it was provided by Congress in the Act providing for the District and Circuit Court of the United States for the State of Nevada, as its ninth section: "That no possessory action between individuals in any of the courts of the United States for the recovery of any mining title, or for damages to any such title, shall be affected by the fact that the paramount title to the land on which such mines are, is in the United States; but each case shall be adjudged by the law of possession." (U. S. Rev. Stat., Sec. 910).

During the time — from the admission of California until this particular legislation, which has since been incorporated into the Revised Statutes of the United States as section 910—the miners in each mining district of the State made their own rules and regulations for the government of mines within the same; and when the courts were called upon to decide disputes growing out of conflicting claims, these rules and regulations measured men's rights to the ground claimed, and were applied and enforced by the courts. They also held, when the defendant set up the outstanding title of the Government to defeat the claimant's title, that the silence and non-action of the United States in relation to its mineral lands in that State amounted to an indirect grant to the miner to occupy and mine the ground; and that priority of possession, and continued development by working, and a compliance with the rules, regulations and customs of the mining district in which the claim was located, were the tests of ownership.

The policy of the Government had, or was, undergoing a change. We have seen that the United States Supreme Court in the case *United States v. Gratiot*, announced that: "It has been the policy of this Government at all times, in disposing of the public lands, *to reserve the mines for the use of the United States.*"

But at the December term of the United States Supreme Court, 1865, the case of *Sparrow v. Snow*, on appeal from the Territory of Nevada, was taken up on a motion by the respondent to dismiss, because of a want of jurisdiction. The controversy was over a mining claim, and one of the points made in support of the motion was: "That the ground in controversy belonged to the United States, and it was not capable of a money valuation of \$1,000, and therefore not of the value of \$1,000 within the meaning of the statute to give the court jurisdiction of the appeal." On this point Chief Justice Chase in delivering the opinion of the court said: "We know also, that the Territorial Legislature has recognized by statute the validity and binding force of the rules, regulations and customs of the mining

districts. And we cannot shut our eyes to the public history, which informs us that under this legislation, and not only without interference by the national Government but under its *implied* sanction, vast mining interests have grown up employing many millions of capital, and contributing largely to the prosperity and improvement of the whole country.

“ We can not dismiss this writ of error, therefore, on the ground that a controversy concerning the possessory right to a mining claim, existing under the express sanction of the Territorial Legislature and the implied sanction of the national Government, does not relate to a subject-matter capable of being valued in money.”

Here was a change of front in twenty-five years by the highest tribunal in the land !

This same august tribunal in a later case decided by it, in 1876, *Heydenfeldt v. Dana Gold and Silver Mining Co.* (93 U. S. 634), announced a changed public policy. The State of Nevada when admitted into the Union received the usual grant of the sixteenth and thirty-sixth sections of land in each township for the support of common schools ; and, by State patent, attempted to convey an eighty-acre tract to the grantors of Heydenfeldt, in July, 1868. In 1867, the defendant's grantors made a discovery of a mineral bearing vein or lode on this tract, and mining claims to the extent of 2000 feet in length were laid upon it, and a United States patent for the same was issued to the defendants in March, 1874, nearly six years after the State patent. Which was the better title was the point for decision.

The court held that mineral land did not pass to the State of Nevada by the grant of school sections, and that the mineral patent though younger was the better title.

The court declares in that case that : “ It has been the settled policy of the Government to *promote* the *development* of the mining resources of the country.” The evidence of this policy is the Act of Congress of July 26th, 1866, in which it is declared “ That the mineral lands of the public

domain, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and occupation by all citizens of the United States and those who have declared their intention to become such, subject to such regulations as may be prescribed by law, and *subject also* to the local customs or rules of miners in the several mining districts, so far as the same may not be in conflict with the laws of the United States.”

In the same case they say: “The whole country is interested in the development of our mineral resources, and to secure it adequate protection was required for those engaged in it.”

In the case of *Smelting Co. v. Kemp* (104 U. S. 653), the United States Supreme Court again say: “The object in allowing patents is to *vest* the *fee* in the miner, and thus encourage the construction of permanent works for the development of the mineral resources of the country.”

And in the case of *Steele v. Smelting Co.*, decided by the same court in 1883, they say: “It is the policy of the country to encourage the development of its mineral resources.” (106 Id. 449.)

So that the policy of the country has changed from “reserving the minerals for the use of the Government” to “encouraging the development of its mineral resources” by citizens of the United States, and those who have declared their intention to become such.

The laws of Congress now furnish this protection to the miner. But they were not passed without meeting with opposition. A little sketch of history is given by Gregory Yale in his valuable work on “Mining Claims and Water Rights” in relation to the passage of the Act of 1866, and its anomalous title “An Act Granting the Right of Way to Ditch and Canal Owners over the Public Lands and for Other Purposes,” which I take the liberty of making a part of this lecture.

“An explanation,” says the writer, “is due to the authors of the law, in order to account for the anomalous title to an Act providing for the issuance of a patent to a quartz

lode, by declaring it to be an Act granting the right of way over the public lands to the owners of ditches and canals. This explanation will be found in the following statements, communicated from Washington by one of the editors of the *Alta California*, and published in that paper on the 19th of May, 1867. Upon referring the statement to Senator Stewart he accepts it as substantially correct. It is here adopted as the legislative history of the Act without any reference to opinions entertained by the writer as to

HOW THE LAW WAS PASSED.

“The miners of California and the States and Territories adjacent thereto, have but a very inadequate idea of the imminent peril in which the pursuit in which they are engaged was placed at the commencement of the thirty-ninth Congress (December, 1865); two years ago there was a strong disposition in Congress and in the East generally to make such a disposition of the mines as would pay the national debt. The idea of relieving the nation of the payment of the enormous taxes which the war has saddled upon us, by the sale of the mines in the far distant Pacific slope, about which few people here have any knowledge whatever, was the most popular that was perhaps ever started — compelling other people to liquidate your obligations has been in all ages and in all nations a highly comfortable and popular proceeding. There were some at the time of which I write who would not be satisfied with the sale of the mines. They held that even after the sale the government should be a sharer in the proceeds realized from them. The first bill on the subject was introduced in the Senate by Mr. Sherman of Ohio, and in the House by Mr. Julian of Indiana. Both of these bills contained the most odious features. Sherman’s bill went to the committee on Public Lands, of which Mr. Stewart was a member. After much consideration it was understood that the committee would report adversely. Julian’s bill received a much more favorable consideration in the House. In fact the House went so

far as to pass a resolution indorsing legislation substantially of the character contemplated in Julian's bill. After much canvassing Mr. Conness and Mr. Stewart came to the conclusion that it was no longer safe to act on the defensive, and that it was necessary to determine what legislation would be acceptable, and to make a bold move to obtain it. The Secretary of the Treasury, McCullough, was then one of the strongest advocates of the sale of the mines, and appeared to be under the impression that it would yield a large revenue. The movement thus far had been encouraged by him, and it was thought that a partial success of his views would be more satisfactory to him than entire defeat. Mr. Conness accordingly went to him to have a bill prepared in his department, which would obviate the odious features of the other two propositions, and get some senator to introduce it, assuring him that a liberal measure would receive the favorable consideration of the Pacific delegation. The result was that the Secretary had prepared the second bill introduced by Mr. Sherman, which was a great gain on the first bill. The bill went to the Committee on Mines of which Mr. Conness was chairman and Mr. Stewart a member. After much discussion these two senators were appointed a committee to draft a substitute, which, after several weeks of close study, resulted in the reporting of a bill substantially the same as the one which is now the law. At this time it was not expected that it would be possible to do more than to get a report of the committee in favor of the measure, which it was thought would be an advanced affirmative position, from which the granting, selling or other calamitous disposition of the mines could be successfully withstood. Upon making the report, however, it was determined to put on the boldest front possible, and try and pass it through the Senate. It came up on the 18th day of June, 1866, and at first, it had but two advocates — its authors. The discussion occupied the entire day, Mr. Stewart supporting the bill. Mr. McDiugal first favored the bill, and then made a speech against it; Mr. Williams of Oregon was opposed to all bills of the

kind. Nesmith contended himself with voting against it. Nye opposed it, and said it would be good policy to let the whole subject alone, and not legislate upon it at all. This speech left his real position somewhat indefinite. In the course of the debate however it became manifest from the remarks of Senator Sherman, Buckalew and Hendricks that the real merits of the bill were beginning to be appreciated by the Senate. The two authors of the bill congratulated themselves on this sign of progress, and resolved to try again. It was called up again on the 28th by Mr. Stewart, and was debated by Senators Stewart, Conness, Sherman, Hendricks and others. After being amended slightly by Mr. Stewart the bill passed the Senate. When it was first introduced the bill had no friends in the House, but after it passed the Senate some of the Pacific delegation began to regard it favorably. It should have gone in the House to the Committee on Mines, of which Mr. Higby was chairman; but Mr. Julian, who is an old member and was then chairman of the Committee on Public Lands, seized on the bill at once, and had it transferred to his committee. Mr. Stewart addressed himself to the members of it, and got every one of them but Julian, but he was intractable. He wanted his bill to go first, and would not let this supersede it. The House, too, was canvassed, and was found to be favorably disposed, but there was no way of getting at the bill. In the meantime Higby had passed a bill from the Committee of Mines in regard to Ditches. It contained only three provisions, and bore no resemblance to the bill in question, but it related to the same subject. When this bill came into the Senate the mining bill was tacked on as a substitute, and was passed. It was then sent back to the House and went on the Speaker's table. In that condition it required a majority to refer it. To get that majority Julian exerted all his strength, but failed. The bill was passed in the House without amendment, and became a law. This accounts for its being entitled 'An Act Granting the Right of Way to Ditch and Canal Owners through the Public Lands, and for Other Purposes.' I have been par-

ticular in hunting up all the facts bearing on the struggle, for the reason that the bill evolved from it is the most important, so far as California is concerned, that has ever been passed by Congress. The rules that have recently been proposed for the execution of the law, it is thought, will meet the wants of the miners. If they do not they will be amended. If difficulty should arise as to the authority to make such regulations under the law a simple resolution, which can be passed any day, will be sufficient to legalize them. It is now thought best not to have the general subject opened again. It is far better to perfect the system which has been established as practical experience shall point the way, than have any more agitation over it in Congress. The result of the whole fight is the grant of all the mines to the miners, with some wholesome regulations as to the manner of holding and working them, which are not in conflict with the existing mining laws, but simply give consistency and uniformity to the whole system. The escape from entire confiscation was much more narrow than the good people of California ever supposed. If either of the bills originally introduced had passed the Pacific States and territories would have received a blow from which they never would have recovered. The Government could only have receded after the most irreparable damage had been done."

In 1870 the mining law was amended. In 1872 the mining laws were recast and passed by Congress as "An Act to promote the development of the mining resources of the United States," which embodied all previous congressional legislation, and added some new and wholesome features. This Act and the amendments thereto constitute the law of the land in relation to the location and right to the possession of mining claims — quartz or placer, upon the public domain; and the right to acquire by purchase the government title to the same.

"The Acts of Congress of 1866 and 1872 dealt with a practical necessity of miners; they were passed to protect locations on veins or lodes, as miners understood those

terms.” (Field, Justice U. S. Sup. Ct. in Richmond Eureka Case, 4 Sawyer, 316.)

“The act of 1872 preserves to the miner the rights acquired under the Act of 1866, and *confers* upon him additional rights. Under the Act of 1866 he could only hold one lode or vein, although more than one appeared within the lines of his surface location. The surface ground was allowed him for the convenient working of the lode or vein located, and for no other purpose; it conferred no right to any other lode or vein. But the Act of 1872 alters the law in this respect; it grants to him the exclusive right of possession to a quantity of surface ground, not exceeding a specified amount, and not only to the particular lode or vein located, but to all other veins, lodes and ledges, the top of apex of which lies within the surface lines of his location, with the right to follow such veins, lodes or ledges to any depth.” (Id. 323, 324.)

LECTURE NO. IV.

GROWTH OF CUSTOMS, RULES AND REGULATIONS AMONG MINERS IN RELATION TO MINING.

To attempt an extended statement of miners' customs, rules and regulations reaching backward into the misty past, is beyond the purpose of this lecture. The customs in the mining district of Spain finally crystallized into positive royal ordinances about the beginning of the eleventh century. Indeed, it is claimed with much plausibility, that in the line of conquests, Spain had been overrun and occupied by Phœnicians, Carthaginians, Romans, Goths and Moors in respective order; and that each conquering nation in turn adopted the existing mining customs and usages formed in force. These are credited with being wise and equitable, and combined civil liberty with due subordination to the reigning sovereign and the laws of the kingdom.

Halleck in his "Mining Laws of Spain and Mexico," gives a compilation of the Spanish mining laws from 1263 to 1584, and from 1584 until 1849, that are very interesting to peruse. No doubt that many things in them would now be rejected as wholly inapplicable to our situation, but many considerate and just provisions can be formed. The historians, Gibbon and Guizot are lavish in their laudations of the clearness and wisdom of Spanish laws which were the outgrowth of custom. Although emanating ostensibly as royal ordinances from the sovereign, they were formulated by learned and experienced men, held in high veneration in Church and State for benevolence and wisdom.

The changes of time has suggested many changes in these mining rules and regulations of that country, and their adoption elsewhere. A royal decree of 1783 promulgated the "Royal Ordinances for the direction, regulation and government of the miners in New Spain, and of its Royal Tribunal General." Many matters in these are similar to the customs, usages, rules and regulations of miners in California, and leave no doubt of their origin. Among these are the rights or privileges of the discoverer of a mine, whether on public or private land, his right to the use of surface ground for the convenient working of his mine — being liable for any damage that the owner might suffer in consequence, which should be assessed and paid; the right of way for water over private lands under similar conditions.

Here, I transcribe from Vale's "Mining Claims and Water Rights," pages 58-9, what is there stated.

"THE REGULATIONS AND CUSTOMS OF MINERS.

* * * * *

"The real mining code, so far as it can be traced by legal ear-marks, has sprung from the customs and usages of the miners themselves, with *rare* applications of common law principles by the courts, to vary them. Most of the rules and customs constituting the code, are easily recog-

nized by those familiar with the Mexican ordinances, the continental mining codes — especially the Spanish, and with the regulations of the Stannary Convocations among the tin bounders of Devon and Cornwall, in England, and the High Peak regulations for the lead mines in the County of Derby.

“ These regulations are *founded in nature*, and are based upon equitable principles, comprehensive and simple, have a common origin, are matured by practice, and provide for both surface and subterranean work, in alluvion, or rock *in situ*.

“ In the earlier days of placer digging in California, the large influx of miners from the western coast of Mexico and South America *necessarily* dictated the system of work to Americans, who were almost entirely inexperienced in this branch of industry, with a few exceptions from the gold mines of North Carolina and Georgia and from the lead mines of Illinois and Wisconsin. The old Californians had little or no experience in mining. The Cornish miners soon spread themselves through the State, and added largely by their experience, practical sense, and industrious habits, in bringing the Code into something like system. The Spanish-American system which had grown up under the practical working of the mining ordinances for New Spain, was the foundation of the rules and customs adapted.

“ Senator Stewart has ascribed undeserved merit to the early miners, in pronouncing them the authors of the local rules and customs. In his letter to Senator Ramsey of Minnesota, he says that the miners were forced from the necessity of the case, to make laws for themselves; that each mining district formed its own rules and adopted its own customs; the similarity of which throughout the entire mining region, extending over an area of fifty thousand square miles, was so great as to attain all the beneficial results of well digested general laws. They were democratic in their character, guarding against every form of monopoly, *requiring continued work and occupation in good faith, to constitute a valid possession*.

“ This letter is an interesting paper coming from a rep-

representative miner, and is correct in stating the nature of the rules and customs, and the uniformity of their adoption. But, they *were not* the spontaneous creation of the miners of 1849–50. Historical accuracy ascribes a different origin to them. They reflect the matured wisdom of the practical miner of past ages, and have their *foundation*, as has been said, in certain natural laws, easily applied to different situations, and were propagated in the California mines by those who had a practical and traditional knowledge of them in their varied form, in the countries of their origin, and were *adopted*, and no doubt gradually improved and judiciously modified, by the Americans. This *self-evident* fact can be admitted without detracting from our national pride.

“The Romans preserved the mining laws and customs, which had prevailed in the gold and silver mines in Spain long before its conquest by Rome; and the legions of Julius Cæsar were taught the mode of mining for tin by the ancient Britons, whose very name is derived from that vulgar metal, and whose laws and customs are still in force in the same localities originating in a remote antiquity ‘surviving all changes of conquest, language and race.’ In acquiring the mines, our magnanimity will enable us to accept the mining customs in part, from the same people, and not exhibit the selfishness of Great Britain, whose exclusive codes are so *perfect* and *absolute* according to her most distinguished author on mining laws, that the local law of a provincial realm, prevailing before Cornwall and Devon were parts of England, must be rejected as *imperium in imperio*. ‘The law of England allows no supremacy of this kind. It tolerates a *lex loci* as a reasonable usage, and it only admits the written Pandects of Justinian and the Decretals of Gregory in the same humble garb of custom.’ (Bainbridge, 557)”

The letter of Senator Stewart thus criticised by Mr. Vale may be found in Appendix No. 1 to 3 Wallace U. S. Supreme Court Reports, and a very interesting, and able document it is, as throwing historical light on early con-

gressional and State legislation respecting the mines of the Pacific States and Territories.

The very case which this appendix is intended to illustrate contains a declaration of the United States Supreme Court to this effect: "We know also, that the Territorial Legislature (Nevada) has recognized by statute the validity and binding force of the rules, regulations and customs of the mining districts. And we cannot shut our eyes to the public history, which informs us that under this legislation, and not only without interference by the National Government, but under its *implied* sanction, vast mining interests have grown up, employing many millions of capital, and contributing largely to the prosperity of the whole country." (*Sparrow v. Strong*, 3 Wall. 104.)

The courts of California held at an early date to the view, that the mineral lands, both public and private, belonged to the State, and that the legislature possessed the power to authorize the entry upon private lands to dig for gold, (*Hicks v. Bell*, 3 Cal. 219, decided in 1853), and that the United States was only a private proprietor of its lands within the State. This view was affirmed in *Irwin & Phillips*, 5 Cal. 149, and reflects the Spanish idea. In 1852 the Legislature of California authorized any person to enter for mining purposes the inclosure of another made for the purpose of cultivation or grazing; and if the lands so occupied contained mines, the previous possession should not preclude the working of such mines, notwithstanding the previous occupation. No provision was made to recompense the occupant for damages sustained in such cases, remarkable as it may seem, and in this omission, was less just than the Spanish rule.

Another case in 5 Cal. 36 (*Stokes v. Barrett*) goes to greater lengths, and holds that the mineral lands belonged to the State. In those days settlers' rights were held subject to miners' rights, if the land proved to be mineral, and the public lands of the United States were adjudged to be held by private ownership and subject to State legislation. But the courts seeing that these positions were un-

tenable, began to recede from them : and in 1855 the legislature passed an act “to protect owners of growing crops, vineyards, buildings, and other improvements in the mining districts of the State,” from invasion by miners. The courts went so far at one time in justifying trespass by them on the public mineral lands, as to hold that there was an implied grant or license from the general Government to the miners, by reason of its non-action in the premises. Considering that the miners’ customs and usages in California, made the right to the possession of a mining claim, as well as the right to divert the water of a flowing stream from its channel for mining or other useful purpose, depend upon prior appropriation and use, in accordance with the Spanish rule, the recognition of these rights in the laws of July 26th, 1866, and May 10th, 1872, relating to mines and water rights, is made clear. The act of 1866 declares the mineral lands to be open to exploration and occupation by certain persons “*subject* to such regulations as may be prescribed by law, and *subject* also, to the local customs or rules of miners in the several mining districts,” etc. Lode claims previously occupied and improved according to the “local customs and rules of the miners in the district,” etc., could be entered and patented by qualified claimants. The *prior* right to the use of water for mining and other useful purposes was to be maintained and protected, whenever the right had vested according to “the local customs, laws and decisions of the courts.”

It is well to remember in this connection that the legislature of California had not, at any time, enacted a body of laws for the government of mines and mining. All legislation for this character of property and the attendant industry, was left where it was found — with the miners. But it did enact in 1851, a rule of evidence, that: “In actions respecting mining claims proof shall be admitted of the customs, usages or regulations, established and in force at the bar or diggings embracing such claims; and such customs, usages or regulations, when not in conflict with the Constitution and laws of this State, shall govern

the decision of the action.” The law-making power of the State recognized the miners customs and usages in each mining district as rules for the courts in deciding actions respecting mining claims. Dakota has a similar provision. Sec. 649, Code Civil Procedure.

For seventeen years (from 1849 until 1866) this condition of affairs continued, and it might have lasted much longer if the attempt of Senator Sherman and Congressman Julian, had not been made in 1865 to pass a law authorizing the sale of the public mineral lands to pay the national debt.

The right of property in mines was made to depend upon discovery and development — discovery being the source of title, and development by working, the condition of the continuance of that right.

The Supreme Court of California in the celebrated case of *Morton v. Solambo Copper Mining Company* (26 Cal. 527), decided in 1864, says:—

“ At the time the foregoing (Sec. 621, Cal. Pr. Act, same as Sec. 649, Code Civil Proc. Dak.), became a part of the law of the land, there had sprung up throughout the mining regions of the State local customs and usages, by which persons engaged in mining pursuits were governed in the acquisition, use, forfeiture, or loss of mining ground (we do not here use the word forfeiture in its common-law sense but in its mining-law sense, as used and understood by the miners, who are the framers of our Codes). The customs differed in different localities, and varied to a greater or less extent according to the character of the mines. They prescribed the acts by which the right to mine a particular piece of ground could be secured, and its use and enjoyment continued and preserved, and by what non-action on the part of the appropriator, such right should become forfeited or lost, and the ground become, as at first, *publici juris*, and open to the appropriation of the next comer. They were few, plain, and simple, and well understood by those with whom they originated. They were well adapted to secure the end designed to be accom-

plished, and were adequate to the judicial determination of all controversies touching mining rights. And, it was a wise policy on the part of the Legislature not only to not supplant them by legislative enactments, but on the contrary to give them the additional weight of legislative sanction. These usages and customs were the fruit of the times, and demanded by the necessities of communities who, though living under the common law, could find therein no clear and well-defined rules for their guidance applicable to the new conditions by which they were surrounded, but were forced to depend upon remote analogies of doubtful application and unsatisfactory results. Having received the sanction of the Legislature they have become as much a part of the law of the land as the common law itself, which was not adopted in a more solemn form. And, it is to be regretted that the wisdom of the legislature in thus leaving mining controversies to the arbitrament of mining laws, has *not*, always, been seconded by the Courts and the legal profession, who seem to have been too long tied down to the treadmill of the common law to readily escape its thralldom, while engaged in the solution of a mining controversy. These customs and usages have, in progress of time, become more general and uniform; and in their leading features are now the same throughout the mining districts of the State; and, however it may have been heretofore, there is no reason why judges or lawyers should wander with counsel back to the time when Abraham dug his well; or explore with them the law of agency or the statute of frauds in order to solve a simple question affecting a mining right, for a more convenient and equally legal solution can be formed nearer home, in the 'customs and usages of the bar or diggings embracing the claim' to which such right is asserted or denied."

The Supreme Court of the United States (*Jennison v. Kirk*, 98 U. S. 457) give the following as their view of the "public history" of mining customs:—

"The discovery of gold in California was followed, as is well known, by an immense immigration into the State,

which increased its population within three or four years from a few thousand to several hundred thousand. The lands in which the precious metals were found belonged to the United States, and were unsurveyed, and not open by law, to occupation and settlement. Little was known of them further than that they were situated in the Sierra Nevada Mountains. Into these Mountains the emigrants in vast numbers, penetrated, occupying the ravines, gulches and canyons, and probing the earth in all directions for the precious metals. Wherever they went, they carried with them that love of order and system of fair dealing which are the prominent characteristics of our people. In *every* district which they occupied they framed certain rules for their government, by which the extent of ground which they could severally hold for mining was designated, their possessory right to such ground secured and enforced, and contests between them avoided or determined. These rules bore a marked similarity, varying in the several districts only according to the extent and character of the mines; distinct provisions being made for different kinds of mining, such as placer mining, quartz mining, and mining in drifts or tunnels. They all recognized discovery — followed by appropriation, as the foundation of the possessor's title, and development by working as the condition of its retention. And they were so framed as to secure to *all* comers, within practical limits, absolute equality of right and privilege in working the mines. Nothing but such equality would have been tolerated by the miners, who were emphatically the *law-makers*, as respects mining, upon the public lands in the State. The first appropriator was everywhere held to have, within certain well-defined limits, a better right than others to the claims taken up; and in all controversies, except as against the Government, he was regarded as the original owner, from whom title was to be traced."

This indorsement of the wisdom of the miners' customs and usages in relation to mining claims, and their tenure, by the highest court in the land, shows that miners know

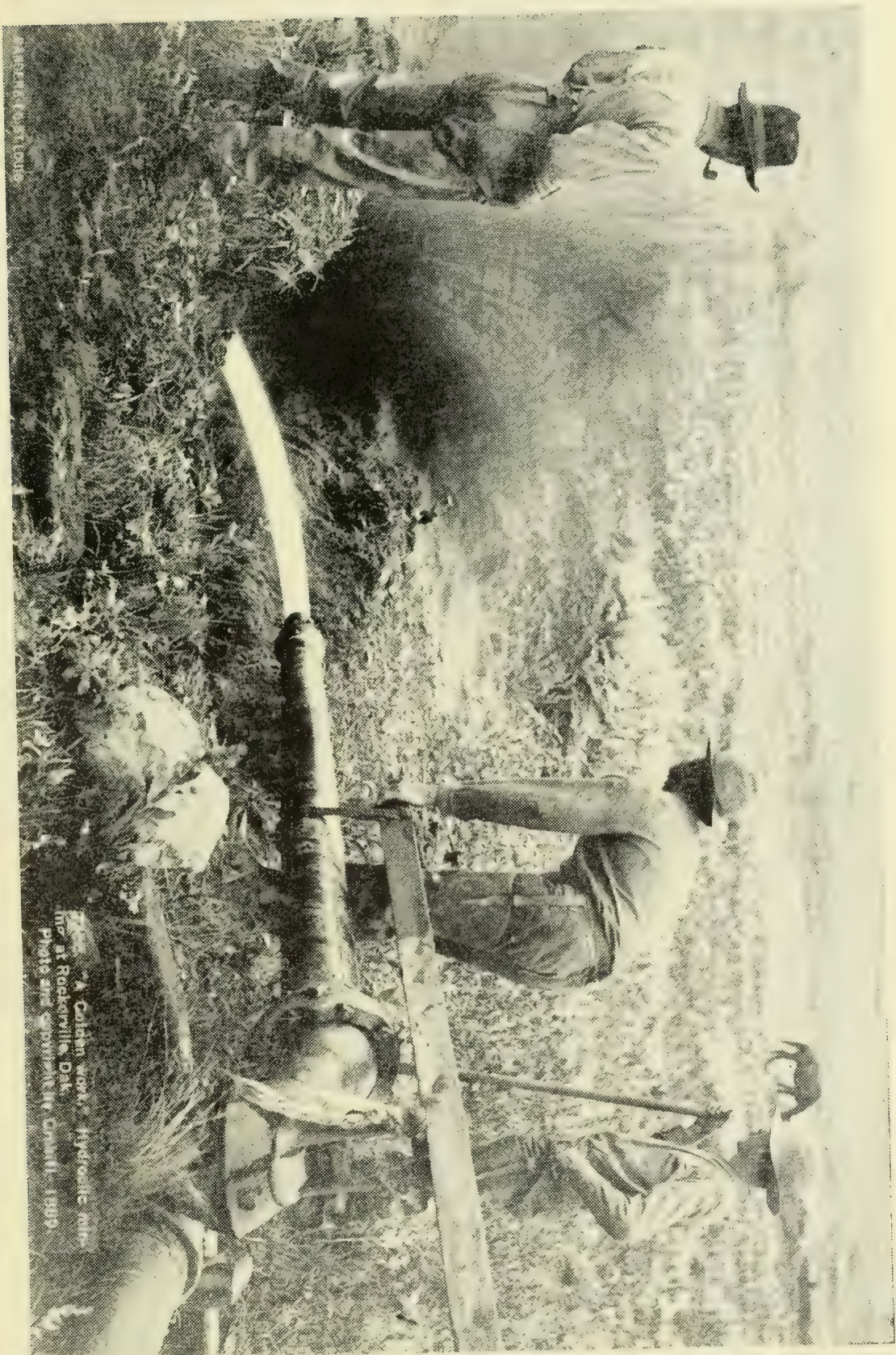


Fig. 2. A Colman work, hydraulic mining at Rockville, Dak. Photo and copyright by Grant, 1909.

their legislative needs very well, if not better than persons in other walks, who attempt to legislate for them. This knowledge includes also the necessity of the use of water in mining regions, which was likewise governed by the customs and usages of miners in the several mining districts. In all cases the right to the use of water on the public lands by prior appropriation, was limited to the extent of actual use. “The doctrine of the common law respecting the rights of riparian owners was not considered as applicable, or only in a very limited degree, to the condition of miners in the mountains.” (Id. 458.)

* * * * *

“For eighteen years — from 1848 to 1866 — the regulations and customs of miners, as enforced and moulded by the courts and sanctioned by the legislation of the States, constituted the law governing property in mines and in water on the public mineral lands.” (Id. 458.)

LECTURE NO. V.

THE MINING LAWS OF THE UNITED STATES AND THE LOCAL MINING LAWS OF THE STATES AND TERRITORIES.

It having been shown, as I think, that the mining customs, rules and regulations of the Pacific States and Territories, were adapted mainly from the Spanish and Mexican ones relating to mining, and from the customs of miners in Devon and Cornwall, England; their applicability as natural laws, to the situation of miners in the newly discovered mining districts of California; and, that the subsequently enacted statute laws of the United States recognized and acknowledged the validity of those customs, rules and regulations of miners on the public mineral lands, and the private rights of property growing out of them, let us now glance over these statute laws of the Government.

The ordinary remedy at the common law for the recov-

ery of the possession of real property, wrongfully withheld by one from another, was in the action of ejectment. And the old rule in such actions was, that the plaintiff could recover only on the strength of his own title. The defendant in possession, although without title himself, could defeat the plaintiff by showing the superior title to the premises in dispute, to be in some third person. This line of defense was often resorted to by defendants, to defeat the plaintiff, in the courts of the Pacific States, by showing that the paramount title to the lands in dispute was in the United States; and eminent lawyers and learned and upright judges oftentimes gave this rule their hearty approval. These courts were oftentimes tenacious sticklers for the application of the English system of law, not fairly applicable to the facts of the cases that arose in those States, and urged it in opposition to the "prior appropriation and possession" rule of the customs and usages of the miners. In such cases the common law became a Procrustean bed on which the rights of plaintiffs were racked to fit its requirements. The common-law doctrine of riparian rights was also relied upon to prevent the diversion of flowing water from the natural beds of streams for use and consumption in mining industries, and for irrigation, notwithstanding the fact that the United States were the riparian proprietors.

The reasons advanced were oftentimes diverse if not flatly contradictory. In the case of *Eddy v. Simpson* (3 Cal. 249), the Supreme Court in commenting on the rule laid down by the District Judge: "That priority of occupation of water legally entitled the appropriator to be protected in its use to the extent of his appropriation," say:—

"The rule laid down by the Court below, while it is a departure from all the rules governing this description of property, would be impracticable in its application, and we think it much safer to adhere to known principles and well settled law (common law) so far as they can be made applicable to the novel questions growing out of the peculiar enterprises in which many of the people of this State

are embarked.” And the decision of the lower Court was reversed because the District Judge held that the prior appropriator of water was entitled to its use. In the face of the fact that moving water in artificial channels, such as ditches, canals, flumes, etc., was a commodity, in mining camps, was measured and valued and sold for domestic uses as well as for mining purposes, and practically consumed at the point where used, the Supreme Court held that there was only a usufruct in the water.

In the next case of note in that State (*Irwin v. Phillips*, 5 Cal. 140) the doctrine of prior appropriation and uses of water was invalid. It was well presented and ably argued by Judge Baldwin, who contended that the Court must apply new principles or make new principles for the subject, as the United States was the owner of the lands, and the riparian proprietor; and only the riparian proprietor could complain of the diversion of the stream from its channel; that the common-law doctrine relative to the rights of riparian ownership was not inflexible, and must yield to the varying and peculiar circumstances of the country. The Court declared:—

“ Courts are bound to take notice of the political and social condition of the country which they judicially rule. In this State the larger part of the territory consists of mineral lands, nearly the whole of which are the property of the public. No right or intent of disposition of these lands, has been shown either by the United States or the State governments; and with the exception of certain State regulations, very limited in their character, a system has been permitted to grow up by the voluntary action and assent of the population, whose free and unrestrained occupation of the mineral region has been tacitly assented to by the one government and heartily encouraged by the expressed legislative policy of the other. If there are, as must be admitted, many things connected with this system which are crude, and undigested, and subject to fluctuation and dispute, there are still some which a universal sense of necessity and propriety have so firmly fixed, as that they

have come to be looked upon as having the force and effect of *res judicata*.

“ Among these, the most important are the rights of miners to be protected in the possession of their selected localities, and the rights of those who, by prior appropriation, have taken the waters from their natural beds, and by costly artificial works have conducted them for miles over mountains and ravines, to supply the necessities of gold diggers, and without which the most important interests of the mineral regions would remain without development.”

In the case of *Crandall v. Woods et al.* (8 Cal. 136), decided in 1857 by the Supreme Court of the State of California, the facts were: Woods, in 1850, claimed and was in possession of a tract of Government land, that contained several springs of mineral water, which after running a short distance united and formed one stream; which ran through a small tract of land below and adjoining the Woods tract in 1851, claimed by other parties who used the waters for natural purposes and for irrigation. In 1852, Woods sold and transferred his right to the springs to one Crandall, the plaintiff, who formed a company called the Union Water Co., that at once constructed a system of water works to supply the town of Grass Valley with water from these springs, which it did from that year.

The defendant Jamieson, who had become the possessor and claimant of the tract below and adjoining, and who connected himself by various conveyances with the possessory title of 1851, claimed and exercised the right of using the water that arose on plaintiffs' ranch and flowed down to his own. Crandall and the Union Water Co. brought an action for damages and a perpetual injunction against Jamieson, and made Woods and his wife parties defendant. The defendants Woods disclaimed any interest in the controversy, while the defendant Jamieson justified his right to the water. In the District Court the plaintiffs had a verdict and judgment in their favor, and upon appeal the judgment was reversed.

Murray, C. J., delivered the opinion of the Court:

“The only question involved in this case is, whether a party who locates upon and appropriates public lands belonging to the United States, is entitled to the use of streams and water-courses naturally flowing through such lands as against persons subsequently appropriating and using the waters of said streams. By the common law the proprietor of land upon the banks of a river course owns to the middle of the stream, and the proprietor of the lands through which the stream flows, is held to be the owner of the bed of the stream, and entitled to the use of the water which flows over his land.”

After stating clearly enough, the common-law doctrine of riparian rights, the Court criticises the decision in the previous case of *Phillips v. Irwin* (5 Cal. 146) which held to the doctrine of “prior appropriation and use” of water on the public lands, as the basis of right, to the water diverted from the stream; and evidently did not agree with it.

It then declares: “But an appropriation of land carries with it the water on the land, or a usufruct in the water, for in such cases the party does not appropriate the water, but the land covered by the water.”

* * * * *

“One who locates upon the public lands with a view of appropriating them to his own use, becomes the absolute owner thereof against every one but the Government, and is entitled to all the privileges and incidents which appertain to the soil, subject to the single exception of rights antecedently acquired. He may admit that he is not the owner in fee, but his possession will be sufficient to protect him against trespassers. If he admits, however, that he is not the owner of the soil, and that he acquired his rights subsequent to those of others, then, as both rest alike for their foundation upon appropriation, the subsequent locator must take subject to the rights of the former, and the rule “qui prior est in tempore, potior est in jure,” must apply.”

* * * * *

“It is understood that the location of land carries with it all the incidents belonging to the soil. Those who construct water ditches will do so with reference to the appropriations of the public domain that have been previously made, and the rights that have been already acquired, with a full knowledge of their own rights as against subsequent locators.”

This decision is approved in the case of *Leigh Co. v. Independent Ditch Co.*, Id. 323, and is cited approvingly by the Court in *Van Sickle v. Haines* (7 Nev. 267).

Although we shall see further along in these lectures, that the principle laid down in this case is in opposition to the rule of decisions in the States of California, Oregon, Nevada and Colorado, and to the rule of decisions in the mountain territories, and to the rule in the Supreme Court of the United States, yet, judges eminent for their legal learning, endeavored in some cases in California to clothe locators and claimants on the public lands with the rights of riparian proprietors, as against those who actually were the prior appropriators of the waters of streams flowing through them.

Difficulties thickened as these rigid rules were applied, and they had to be softened down, or give way entirely to the usages and customs of the miners. The rule of prior appropriation and use, was the miners' rule of right, in regard to land and water, where the title was in the United States; and generally, Courts enforced this rule in cases brought before them, involving disputes to these novel kinds of property, that were acquired by open trespass on the public lands, in antagonism to the supposed public policy of the Government reserving the mineral lands for its own use; and to the common law doctrine that water should flow where it has always been accustomed to flow. But the government did nothing to assert its rights against these trespasses, exacted no royalty from those who were robbing the soil of its precious metals, or diverting the waters of its streams from their accustomed channels to make profitable indus-

tries near, as well as far away from the point of such diversion, whether conducted by our own citizens or by aliens. It was the owner of the lands as well as the riparian proprietor of the streams that coursed through them on their way to the sea. The native born, or foreign born persons of Europe, were accorded no greater rights to mine for minerals in the early days of the gold excitement in California than the tawny, almond-eyed Japs from Japan and the Chinamen from Chinese Tartary, who flew to our shores from the old world of Asia expecting to become suddenly rich in our mines, and to shortly return laden with wealth, back to their land. For a few years the customs and usages growing out the natural law, alone prevailed. He who was first in time was recognized as being the stronger in right.

Witnessing the seeming apathy of the Government, the courts of California, or some of them at least, went to the extent of deciding in controversies before them, that the silence and inaction of the Government with regard to mining on its lands, amounted to an implied grant of the lands for that purpose; and the Supreme Court of the United States in the case of *Sparrow v. Strong*, already referred to, gave a sort of approval to the same view. The earlier appropriator of mining ground, or of the water of a stream for beneficial purposes, was generally held to have the better right to it. Some judicial dissent made itself heard at times and occasionally courts undertook to fit the arbitrary rules of the common law to disputes about such property rights, before them. Presently, the State legislature began to make race distinctions, and authorized the levying of a tax on Asiatic miners, for the privilege of mining; while Europeans, Mexicans, Chilians, and persons of African descent were on an equality so far as the right to mine for gold was concerned.

This was the situation until February 27th, 1865, when Congress created the District and Circuit Court of the United States for the State of Nevada, and provided in the act creating these courts, in the ninth section, "That no

possessory action between individuals in any of the courts of the United States for the recovery of any mining title, or for damages to any such title, shall be affected by the fact that the paramount title to the land on which such mines are, is in the United States; but each case shall be adjudged by the law of possession." This provision is incorporated into the Revised Statutes of the United States as section 910; and was and is, a recognition that miners acquired a property interest in the mining claims which they located and held upon the public mineral lands. The legislative expression title, used three times in this provision — "mining title," "such title," and "paramount title," hardly means that the two former are of the same character as the latter. The only evidence of title which the miner before had or could have to his claim, was possession, which is only an element of title. Judicial interpretations of a later date, that stand unimpaired, hold that the mining laws of Congress subsequently enacted which have thrown open the public mineral land to exploration and occupation, is merely a license to explore and occupy, with a preference right to purchase the title after certain named conditions have been complied with, where the proof of such compliance has been lodged in the United States Land Office, and accepted as sufficient by the land officers. So long as this license remains unrevoked, "the right of the locator to the possession of his claim and to appropriate to his own use the mineral deposits therein, is full and complete, and he need not take any steps to purchase the land or obtain a patent for it." (*Chapman v. Long*, 4 Saw. 35.) It has also been likened to a tenancy at will, which the Government can terminate at any time, by a repeal of the law, before the purchase money is paid.

The term "title" as used in this provision, is synonymous with "claim" as understood among miners who were governed by the "customs, usages or regulations established and in force at the bar or diggings embracing such claims." A mere right of possession does not require title: It may exist in opposition to it temporarily, as

when a tenant for a term has been evicted by a stranger with the assent or connivance of the landlord; or when a party is wrongfully deprived of his rightful possession of premises by one holding the title to it.

After the adoption of this provision by Congress, there was no efficacy in defending in a possessory action to a mining claim on the ground that the paramount title was in the Government. The rule of time became the rule of right, and the first taker was protected in his entry or appropriation.

Following close upon this, came the act of Congress of July 26th, 1866 — the history of which has been given in a previous lecture, and which was entitled: “An act granting the right of way to ditch and canal owners over the public lands, and for other purposes,” which was as follows:—

“An Act granting the right of way to ditch and canal owners over the public lands, and for other purposes:

“Be it enacted by the Senate and House of Representatives of the United States in Congress assembled,

“That the mineral lands of the public domain, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and occupation by all citizens of the United States, and those who have declared their intention to become citizens, subject to such regulations as may be prescribed by law, and subject also, to the local customs or rules of miners in the several mining districts, so far as the same may not be in conflict with the laws of the United States.

“Sec. 2. And be it further enacted, that whenever any person, or association of persons, claims a vein or lode of quartz or other rock in place, bearing gold, silver, cinnabar or copper, having previously occupied and improved the same according to the local customs or rules of miners in the district where the same is situated, and having expended in actual labor and improvements thereon, an amount of not less than one thousand dollars, and in regard to whose possession there is no controversy or opposing claim, it

shall and may be lawful for said claimant or association of claimants to file in the local land office a diagram of the same, so extended laterally or otherwise, as to conform to the local laws, customs and rules of miners, and to enter such tract and receive a patent therefor, granting such mine together with the right to follow such vein or lode, with its dips, spurs, angles and variations, to any depth, although it may enter the land adjoining, which land adjoining shall be sold subject to this condition.

“ Sec. 3. And it be further enacted, That upon the filing of the diagram as provided in the second section of this act, and posting the same in a conspicuous place on the claim, together with a notice of intention to apply for a patent, the Register of the Land Office shall publish a notice of the same in a newspaper published nearest to the location of said claim, and shall also post such notice in his office for the period of ninety days ; and after the expiration of such period, if no adverse claim shall have been filed, it shall be the duty of the surveyor-general upon application of the party, to survey the premises and make a plat thereof, indorsed with his approval, designating the number and description of the location, the value of the labor and improvements, and the character of the vein exposed; and upon the payment to the proper officer of five dollars per acre, together with the cost of such survey, plat and notice, and giving satisfactory evidence that such diagram and notice have been posted on the claim during said period of ninety days, the Register of the Land Office shall transmit to the General Land Office said plat, survey and description, and a patent shall issue for the same thereupon. But said plat, survey or description shall in no case cover more than one vein or lode, and no patent shall issue for more than one vein or lode which shall be expressed in the patent issued.

“ Sec. 4. And it be further enacted, That when such location and entry of a mine shall be upon unsurveyed lands, it shall and may be lawful after the extension thereto of the public surveys, to adjust the surveys to the limits of

the premises according to the location and possession of the plat aforesaid; and the surveyor-general may, in extending the surveys, vary the same from a rectangular form, to suit the circumstances of the country and the local rules, laws and customs of the miners; provided, that no location hereafter made shall exceed two hundred feet in length along the vein for each locator, with an additional claim for discovery to the discoverer of the lode, with all its dips, variations, and angles, together with a reasonable quantity of surface, for the convenient working of the same, as fixed by local rules; and provided further, that no person may make more than one location on the same lode, and not more than three thousand feet shall be taken in any one claim by any association of persons.

Sec. 5. And it be further enacted, That as a further condition of sale, in the absence of necessary legislation by Congress, the local legislature of any State or Territory, may provide rules for working mines, involving easements, drainage, or other necessary means to their complete development; and those conditions shall be fully expressed in the patent.

“Sec. 6. And it be further enacted, That whenever any adverse claimant to any mine, located and claimed as aforesaid, shall appear before the approval of the survey, as provided in the third section of this Act, all proceedings shall be stayed until the final settlement and adjudication, in the courts of competent jurisdiction, of the rights of possession to such claim, when a patent may issue as in other cases.

“Sec. 7. And it be further enacted, That the President of the United States be, and he is hereby, authorized to establish additional land districts, and to appoint the necessary officers under existing laws, whenever he may deem the same necessary for the public convenience in executing the provisions of this Act.

“Sec. 8. And it be further enacted, That the right of way for the construction of highways over public lands not reserved for public uses, is hereby granted.

Sec. 9. And it be further enacted, That whenever, by priority of possession rights to the use of water for mining, agricultural, manufacturing or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decision of the Courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes aforesaid, is hereby acknowledged and confirmed; provided, however, that whenever, after the passage of this Act, any person or persons shall, in the construction of any ditch or canal, injure or damage the possession of any settler on the public domain, the party committing such injury shall be liable to the party injured for such injury or damage.

“Sec. 10. And it be further enacted, That whenever prior to the passage of this act, upon the lands heretofore designated as mineral lands, which have been excluded from survey and sale, there have been homesteads made by citizens of the United States, or persons who have declared their intention to become citizens, which homesteads have been improved and used for agricultural purposes, and upon which there have been no valuable mines of gold, silver, cinnabar or copper discovered, and which are properly agricultural lands, the said settlers or owners of such homesteads shall have a right of pre-emption thereto, and shall be entitled to purchase the same at the price of one dollar and twenty-five cents per acre, and in quantity not to exceed one hundred and sixty acres; or said parties may avail themselves of the provisions of the Act of Congress, approved May twenty, eighteen hundred and sixty-two, entitled “An Act to secure homesteads to actual settlers on the public domain” and acts amendatory thereof.

“Sec. 11. And it be further enacted, That upon the survey of the lands aforesaid, the Secretary of the Interior may designate and set apart such portions of the said lands as are clearly agricultural lands, which lands shall thereafter be subject to pre-emption and sale as other public lands of

the United States, and subject to all the laws and regulations applicable to the same. Approved July 26th, 1866.”

This act remained in force until July 9th, 1870, when it was amended, by the passage by Congress, and its approval of another mining statute which was as follows: —

“An Act to amend ‘An Act granting the right of way to ditch and canal owners over the public lands, and for other purposes:’

“Be it enacted by the Senate and House of Representatives in Congress assembled, That the act granting the right of way to ditch and canal owners over the public lands, and for other purposes, approved July 26th, 1866, be and the same is hereby amended by adding thereto the following additional sections, numbered twelve, thirteen, fourteen, fifteen, sixteen and seventeen respectively, which shall hereafter constitute and form a part of the aforesaid Act.

“Sec. 12. And be it further enacted, That claims usually called ‘placers,’ including all forms of deposit, excepting veins of quartz or other rock in place, shall be subject to entry and patent under this act, under like circumstances and conditions and upon similar proceedings as are provided for vein or lode claims; provided, that where the lands have been previously surveyed by the United States, the entry in its exterior limits shall conform to the legal subdivisions of the public land, no further survey or plat in such case being required, and the lands may be paid for at the rate of two dollars and fifty cents per acre; provided, further, that legal subdivisions of forty acres may be subdivided into ten-acre tracts; and two or more persons or associations of person, having contiguous claims of any size, although said claims may be less than ten acres each, may make joint entry thereof; and provided, further, that no location of a placer claim hereafter made, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States surveys. And nothing in this section contained shall defeat the or impair any bona fide pre-emption

or homestead claim upon agricultural lands, or authorize the sale of the improvements of any bona fide settler to any purchaser.

“ Sec. 13. And it be further enacted, that where said person or association, they and their grantors, shall have held and worked their said claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or Territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this act, in the absence of any adverse claim; provided, however, that nothing in this act shall be deemed to impair any lien which may have attached in any way whatsoever, to any mining claim or property thereto attached prior to the issuance of a patent.

“ Sec. 14. And it be further enacted, That all ex parte affidavits required to be made under this act, or of the act of which it is amendatory, may be verified before any officer authorized to administer oaths within the land district where the claims may be situated.

“ Sec. 15. And it be further enacted, That Registers and Receivers shall receive the same fees for services under this act as are provided by law for like services under other acts of Congress; and that effect shall be given to the foregoing act according to such regulations as may be prescribed by the Commissioner of the General Land Office.

“ Sec. 16. And it be further enacted, That so much of the act of March 2d, 1853, entitled “ An Act to provide for the survey of the public lands of California, the granting of pre-emption rights and for other purposes,” as provide that none other than township lines shall be surveyed where the lands are mineral, is hereby repealed. And the public surveys are hereby extended over all such lands; provided, that all subdividing of the surveyed lands into lots of less than one hundred and sixty acres may be done by county and local surveyors at the expense of the claimants; and provided, further, that nothing herein contained shall require the survey of waste or useless land.

“Sec. 17. That none of the rights conferred by sections five, eight and nine of the act of which this is amendatory, shall be abrogated by this act; and the same are hereby extended to all public lands affected by this act; and all patents granted or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights as may have been acquired under or recognized by the ninth section of the act of which this is amendatory. But nothing in this act shall be construed to repeal, impair, or in any way affect the provisions of the ‘Act granting to A. Sutro the right of way and other privileges to aid in the construction of a draining and exploring tunnel to the Comstock lode, in the State of Nevada.’ Approved July 25th, 1866. Approved July 9th, 1870.”

These two acts of Congress did not achieve for the miners what their authors expected. The one lode limitation to the claim, became a fruitful source of dispute and litigation, and enabled the dishonest and thriftless to watch for opportunities to prospect within the surface ground belonging to the first locator for other veins than the one discovered and thus annoy and harass him. Usually the local rules and customs of the miners fixed the width of the surface ground “for the convenient working of the vein,” at twenty-five feet on either side of it. No stakes were necessary but the discovery stake, upon which the notice of discovery and location was placed, and when claims on veins or lodes were limited to two hundred feet in length, the locator had the right to follow the vein on its lengthwise course for that distance as well as on its downward course to any depth. The workings of the mining laws of Congress were not satisfactory. These acts did not grant to the miner new rights in addition to those that were already enjoyed by him, except in the matter of obtaining the patent title. The size of the claims remained as they had been fixed by the miners in the several districts. The right of the prior locator of the claim was the same as before. But when positive law was enacted, relating to

mining claims on the public lands, by Congress, the rules, usages and customs of the miners conflicting therewith had to give way.

For such reasons mainly, the Act of May 10th, 1872, was passed by Congress which preserved to the miner the rights acquired under the Act of 1866, and the amendment thereto, and conferred upon him additional rights. "Under the Act of 1866 he could only hold one lode or vein, although more than one appeared within the lines of his surface location. The surface ground was allowed him for the convenient working of the lode or vein located, and for no other purpose; it conferred no right to any other lode or vein. But the Act of 1872 and the amendment thereto alter the law in this respect; it grants to him the exclusive right of possession to a quantity of surface ground not exceeding a specified amount, and, not only to the particular lode or vein located, but to all other veins, lodes, and ledges, the top or apex of which lies within the surface lines of his location, with the right to follow such veins, lodes or ledges to any depth." (Mr. Justice Field in the Eureka Richmond case, 4th Sawyer, 323-4.) The same eminent and learned jurist remarked in the same case: "The Acts of Congress of 1866 and 1872 dealt with a practical necessity of miners; they were passed to protect locations on veins or lodes, as miners understood those terms."

These laws were subsequently codified by the Code Commissioners appointed by Congress, and appear in the United States Revised Statutes as "Chapter Six, Mineral Lands and Mining Resources." I herewith append with the amendments thereto, to date.

"Sec. 2318. In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law. (Act of Congress, July 4, 1866, Ch. 166, Sec. 5.)

"Sec. 2319. All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and

purchase, and the lands in which they are found, to occupation and purchase, by citizens of the United States and those who have declared their intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts so far as the same are applicable and not consistent with the laws of the United States. (Act of Congress, May 10, 1872, Ch. 152, Sec. 1.)

“ Sec. 2320. Mining claims upon veins or lodes of quartz or other rock in place, bearing gold, silver, cinnabar, lead, tin, copper or other valuable deposits heretofore located, shall be governed as to length along the vein or lode by the customs, regulations and laws in force at the date of their location. A mining claim located after the tenth of May, eighteen hundred and seventy-two, whether located by one or more persons, may equal, but shall not exceed one thousand five hundred feet in length along the vein or lode, but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface, nor shall any claim be limited by any mining regulation to less than twenty-five feet on each side of the middle vein at the surface, except where adverse rights existing on the tenth day of May, eighteen hundred and seventy-two, render such limitation necessary. The end lines of each claim shall be parallel to each other. (Act of Congress, May 10, 1872, Ch. 152, Sec. 2.)

“ Sec. 2321. Proof of citizenship under this chapter may consist, in the case of an individual, of his own affidavit thereof; in the case of an association of persons unincorporated, of the affidavit of their authorized agent, made on his own knowledge or upon information and belief; and in the case of a corporation organized under the laws of the United States or of any State or Territory thereof, by the filing of a certified copy of their charter or certificate of incorporation. (Act of Congress, May 10, 1872, Ch. 152, Sec. 7.)

“ Sec. 2322. The locators of all mining locations heretofore made, or which shall hereafter be made, on any mineral vein, lode or ledge, situated on the public domain, their heirs and assigns, where no adverse claim exists, on the tenth day of May, eighteen hundred and seventy-two, so long as they comply with the laws of the United States, and with State, territorial and local regulations not in conflict with the laws of the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes and ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations; but their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward, as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges; and nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim to enter upon the surface of a claim owned or possessed by another. (Act of Congress, May 10, 1872, Ch. 152, Sec. 3.)

“ Sec. 2323. Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof not previously known to exist, discovered in such tunnel, to the same extent as if discovered from the surface; and locations on the line of such tunnel of veins or lodes not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but failure to prosecute the

work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel. (Act of Congress, May 10, 1872, Ch. 152, Sec. 4.)

“ Sec. 2324. The miners of each mining district may make regulations, not in conflict with the laws of the United States, or with the laws of the State or Territory in which the district is situated, governing the location, manner of recording, amount of work necessary to hold possession of a mining claim, subject to the following requirements: The location must be distinctly marked on the ground, so that its boundaries can be readily traced. All records of mining claims hereafter made shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. On each claim located after the tenth of May, eighteen hundred and seventy-two, and until a patent has been issued therefor, not less than one hundred dollars' worth of labor shall be performed or improvements made during each year. On all claims located prior to the tenth day of May, eighteen hundred and seventy-two, ten dollars' worth of labor shall be performed or improvements made by the tenth of June, eighteen hundred and seventy-four, and each year thereafter for each one hundred feet in length along the vein until a patent has been issued therefor; but where such claims are held in common, such expenditure may be made upon any one claim, and upon a failure to comply with these conditions, the claim or mine upon which such failure occurred shall be open to relocation, in the same manner as if no location of the same had ever been made; provided, that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such location. Upon the failure of any one of several co-owners to contribute his proportion of the expenditures required hereby, the co-owners who have performed the labor or made the improvements may, at the expiration of the year, give

such delinquent co-owner personal notice in writing or notice by publication in the newspaper published nearest the claim, for at least once a week for ninety days, and if, at the expiration of ninety days after such notice in writing or by publication, such delinquent should fail or refuse to contribute his proportion of the expenditure required by this section, his interest in the claim shall become the property of his co-owners who have made the required expenditures. (Act of Congress, May 10, 1872, Ch. 152, Sec. 5.) (That Section 2324 of the Revised Statute be and the same is hereby amended so that where a person or company has or may run a tunnel for the purpose of developing a lode or lodes, owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, whether located prior to or since the passage of said act; and such person or company shall not be required to perform work on the surface of said lode or lodes in order to hold the same as required by said act. (Act of Congress, Feb. 11, 1875.)) (That the period within which the work required to be done annually on all unpatented mineral claims shall commence on the first day of January succeeding the date of location of such claim, and this section shall apply to all claims located since the tenth day of May, A. D. eighteen hundred and seventy-two. (Act of Congress Jan. 22, 1880, Sec. 2.)) ”

1. The following is an amendment, approved June 6, 1874, which for some reason — probably a mistake — was omitted from the Revised Statutes: “ That the provisions of the fifth section of the act entitled ‘ An act to promote the development of the mining resources of the United States,’ passed May 10, 1872, which requires expenditures of labor and improvements on claims located prior to the passage of said act, are hereby so amended that the time for the first annual expenditure on claims located prior to the passage of said act, shall be extended to the first day of January, eighteen hundred and seventy-five.”

2. The amendment of 1880, of course, is not included in the revision from which this compilation is made.

“Sec. 2325. A patent for any land claimed and located for valuable deposits may be obtained in the following manner: Any person, association or corporation authorized to locate a claim under this chapter, having claimed and located a piece of land for such purposes, who has or have complied with the terms of this chapter, may file in the proper land office an application for a patent, under oath, showing such compliance, together with a plat and field notes of the claim or claims in common, made by or under the direction of the United States surveyor-general, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat previous to the filing of the application for a patent, and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in such land office, and shall thereupon be entitled to a patent for the land in the manner following: The register of the land office, upon filing of such application, plat, field notes, notices and affidavits, shall publish a notice that such application has been made, for the period of sixty days, in a newspaper to be by him designated as published nearest to such claim; and he shall also post such notice in his office for the same period. The claimant, at the time of filing his application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the United States surveyor-general that five hundred dollars' worth of labor has been expended or improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by such reference to natural objects or permanent monuments as shall identify the claim, and furnish an accurate description to be incorporated in the patent. At the expiration of the sixty days of publication,

the claimant shall file his affidavit, showing that the plat and notice have been posted in a conspicuous place on the claim during such period of publication. If no adverse claim shall have been filed with the register and receiver of the proper land office at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent, upon the payment to the proper officer of five dollars per acre, and that no adverse claim exists and thereafter no objection from third parties to the issuance of a patent shall be heard, except it be shown that the applicant has failed to comply with the terms of this chapter. (Act of Congress, May 10, 1872, Ch. 152, Sec. 6.) (That where the claimant for a patent is not a resident of the land district wherein the vein, lode, ledge or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section by the claimant for such patent may be made by his, her or its authorized agent, where said agent is conversant with the facts sought to be established by said affidavits; and provided, that this section shall apply to all applications now pending for patents to mineral lands. (1 Act of Congress, Jan. 22, 1880, Sec. 1.)”

1. This amendment is inserted with the original section for the convenience of the reader.

“Sec. 2326. Where an adverse claim is filed during the period of publication, it shall be upon oath of the person or persons making the same, and shall show the nature, boundaries, and extent of such adverse claim, and all proceedings, except the publication of notice and making and filing the affidavit thereof, shall be stayed until the controversy shall have been settled or decided by a court of competent jurisdiction, or the adverse claim waived. It shall be the duty of the adverse claimant, within thirty days after filing his claim, to commence proceedings in a court of competent jurisdiction, to determine the question of the right of possession, and prosecute the same with reasonable diligence to final settlement; and a failure so to do shall be a waiver of his adverse claim. After such judgment

shall have been rendered, the party entitled to the possession of the claim, or any portion thereof, may, without giving further notice, file a certified copy of the judgment roll with the register of the land office, together with the certificate of the surveyor-general that the requisite amount of labor has been expended or improvements made thereon, and the description required in other cases, and shall pay to the receiver five dollars per acre for his claim, together with the proper fees, whereupon the whole proceedings and the judgment roll shall be certified by the register to the commissioner of the general land office, and a patent shall issue thereon for the claim, or such portion thereof as the applicant shall appear, from the decision of the court, to rightly possess. If it appears from the decision of the court that several parties are entitled to separate and different portions of the claim, each party may pay for his portion of the claim, with the proper fees, and file the certificate and description by the surveyor-general, whereupon the register shall certify the proceedings and judgment roll to the commissioner of the general land office, as in the preceding case, and patents shall issue to the several parties according to their respective rights. Nothing herein contained shall be construed to prevent the alienation of the title conveyed by a patent for a mining claim to any person whatever. (Act of Congress, May 10, 1872, Ch. 152, Sec. 7.) (Amended Act Congress, March 3, 1881, so that jury must find which of the parties establishes title, and if neither, to so declare in their verdict. U. S. Sess. Laws, 1881)."

(Amended Act Congress, April 26, 1882, authorizing agent or attorney to make adverse. See circular, 1883, p. 33.)

See

Gwillan v. Donnellan, 115 U. S. 45;

Walverton v. Nichols, 119 U. S. 485;

Manning v. Shehlow, 18 Pac. Rep. (Col.) 626.

"Sec. 2327. The description of vein or lode claims, upon

surveyed lands, shall designate the location of the claim with reference to the lines of the public surveys, but need not conform therewith; but where a patent shall be issued for claims upon unsurveyed lands, the surveyor-general, in extending the surveys, shall adjust the same to the boundaries of such patented claim, according to the plat or description thereof, but so as in no case to interfere with or change the location of any such patented claim. (Act of Congress, May 10, 1872, Ch. 152, Sec. 8.)

“Sec. 2328. Applications for patents for mining claims under former laws now pending may be prosecuted to a final decision in the general land office; but in such cases, where adverse rights are not affected thereby, patents may issue in pursuance of the provisions of this chapter; and all patents for mining claims upon veins or lodes heretofore issued shall convey all the rights and privileges conferred by this chapter where no adverse rights existed on the tenth day of May, eighteen hundred and seventy-two. (Act of Congress, May 10, 1872, Ch. 152, Sec. 9.)

“Sec. 2329. Claims usually called ‘placers,’ including all forms of deposits, excepting veins of quartz or other rock in place, shall be subject to entry and patent under like circumstances and conditions, and upon similar proceedings as are provided for vein or lode claims; but where the lands have been previously surveyed by the United States, the entry in its exterior limits shall conform to the legal subdivisions of the public lands. (Act of Congress July 9, 1870, Ch. 235, Sec. 12.)

“Sec. 2330. Legal subdivisions of forty acres may be subdivided into ten-acre tracts, and two or more persons or associations of persons, having contiguous claims of any size, although such claims may be less than ten acres each, may make joint entry thereof, but no location of a placer claim made after the ninth day of July, eighteen hundred and seventy, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States survey; and nothing in this section contained shall defeat or impair any bona fide

pre-emption or homestead claim upon agricultural lands, or authorize the sale of the improvements of any bona fide settler to any purchaser. (Act of Congress, July 9, 1870, Ch. 235, Sec. 12.)

“ Sec. 2331. Where placer claims are upon surveyed lands and conform to legal subdivisions, no further survey or plat shall be required, and all placer mining claims located after the tenth of May, eighteen hundred and seventy-two, shall conform as near as practicable with the United States system of public land surveys and the rectangular subdivisions of such surveys, and no such location shall include more than twenty acres for each individual claimant, but where placer claims cannot be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands; and where, by the segregation of mineral lands in any legal subdivision, a quantity of agricultural land less than forty acres remains, such fractional portion of agricultural land may be entered by any party qualified by law, for homestead or pre-emption purposes. (Act of Congress, May 10, 1872, Ch. 152, Sec. 10).

“ Sec. 2332. Where such person or association, they and their grantors, have held and worked their claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or Territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this chapter, in the absence of any adverse claim; but nothing in this chapter shall be deemed to impair any lien which may have attached in any way whatever to any mining claim or property thereto attached prior to the issuance of a patent. (Act of Congress, July 9, 1870, Ch. 235, Sec. 13.)

“ Sec. 2333. Where the same person, association, or corporation is in possession of a placer claim, and also a vein or lode included within the boundaries thereof, application shall be made for a patent for the placer claim, with the statement that it includes such vein or lode; and in such a case a patent shall issue for the placer claim, subject to the

provisions of this chapter, including such vein or lode, upon the payment of five dollars per acre for such vein or lode claim, and twenty-five feet of surface on each side thereof. The remainder of the placer claim, or any placer claim not embracing any vein or lode claim, shall be paid for at the rate of two dollars and fifty cents per acre, together with all costs of proceedings; and where a vein or lode, such as is described in section twenty-three hundred and twenty, is known to exist (*Iron Silver M. Co. v. Cheeseman*, 116 U. S. 533; *U. S. v. Iron Silver Mfg. Co.*, 9 S. C. Rep. 198) within the boundaries of a placer claim, an applicant for a patent for such placer claim, which does not include an application for the vein or lode claim, shall be construed as a conclusive declaration that the claimant of the placer claim has no right of possession of the vein or lode claim; but where the existence of a vein or lode in a placer claim is not known, a patent for the placer claim shall convey all valuable mineral and other deposits within the boundaries thereof. (Act of Congress, May 10, 1872, Ch. 152, Sec. 11.)

“Sec. 2334. The surveyor-general of the United States may appoint in each land district containing mineral lands as many competent surveyors as shall apply for appointment to survey mining claims. The expenses of the survey of vein or lode claims, and the survey and subdivision of placer claims into smaller quantities than one hundred and sixty acres, together with the cost of publication of notices, shall be paid by the applicants, and they shall be at liberty to obtain the same at the most reasonable rates, and they shall also be at liberty to employ any United States deputy surveyor to make the survey. The commissioner of the general land office shall also have power to establish the maximum charges for surveys and publication of notices under this chapter, and in case of excessive charges for publication, he may designate any newspaper published in a land district where mines are situated, for the publication of mining notices in such district, and fix the rates to be charged by such paper; and

to the end that the commissioner may be fully informed on the subject, each applicant shall file with the register a sworn statement of all charges and fees paid by such applicant for publication and surveys, together with all fees and money paid the register and receiver of the land office, which statement shall be transmitted, with the other papers in the case, to the commissioner of the general land office. (Act of Congress, May 10, 1872, Ch. 152, Sec. 12.)

“ Sec. 2335. All affidavits required to be made under this chapter may be verified before any officer authorized to administer oaths within the land district where the claims may be situated, and all testimony and proofs may be taken before any such officer, and, when duly certified by the officer taking the same, shall have the same force and effect as if taken before the register and receiver of the land office. In cases of contests as to the mineral or agricultural character of land, the testimony and proofs may be taken as herein provided, on personal notice of at least ten days to the opposing party; or if such party cannot be found, then by publication of at least once a week for thirty days in a newspaper, to be designated by the register of the land office as published nearest to the location of such land; and the register shall require proof that such notice has been given. (Act of Congress, May 10, 1872, Ch. 152, Sec. 13.)

“ Sec. 2336. Where two or more veins intersect or cross each other, priority of title shall govern, and such prior location shall be entitled to all ore or mineral contained within the space of intersection; but the subsequent location shall have the right of way through the space of intersection, for the purpose of the convenient working of the mine; and, where two or more veins unite, the oldest or prior location shall take the vein below the point of union, including all the space of intersection. (Act of Congress, May 10, Ch. 152, Sec. 14.)

“ Sec. 2337. Where non-mineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes,

such non-adjacent surface ground may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location hereafter made of such non-adjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this chapter for the superficies of the lode. The owner of a quartz mill or reduction works not owning a mine in connection therewith, may also receive a patent for his mill site as provided in this section (Act of Congress, May 10, Ch. 152, Sec. 115.)

“ Sec. 2338. As a condition of sale in the absence of necessary legislation by Congress, the local legislature of any State or Territory may provide rules for working mines involving easements, drainage, and other necessary means to their complete development, and those conditions shall be fully expressed in the patent. (Act of Congress, July 26, 1886, Ch. 262, Sec. 5.)

“ Sec. 2339. Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes herein specified, is acknowledged and confirmed; but whenever any person in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage. (Act of Congress, July 26, 1866, Ch. 262, Sec. 9.)

“ Sec. 2340. All patents granted, or pre-emption or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been

acquired under or recognized by the preceding section. (Act of Congress, July 9, 1870, Ch. 235, Sec. 17.)

“ Sec. 2341. Wherever, upon the lands heretofore designated as mineral lands, which have been excluded from survey and sale, there have been homesteads made by citizens of the United States, or persons who have declared their intention to become citizens, which homesteads have been made, improved, and used for agricultural purposes, and upon which there have been no valuable mines of gold, silver, cinnabar or copper discovered, and which are properly agricultural lands, the settlers or owners of such homesteads shall have a right of pre-emption thereto, and shall be entitled to purchase the same at a price of one dollar and twenty-five cents per acre, and in quantity not to exceed one hundred and sixty acres, or they may avail themselves of the provisions of chapter five of this title, relating to homesteads. (Act of Congress, July 26, 1866, Ch. 262, Sec. 10.)

“ Sec. 2342. Upon the survey of the lands described in the preceding section, the Secretary of the Interior may designate and set apart such portions of the same as are clearly agricultural lands, which lands shall thereafter be subject to pre-emption and sale as other public lands, and be subject to all the laws and regulations applicable to the same. (Act of Congress, July 26, 1866, Ch. 262, Sec. 11.)

“ Sec. 2343. The President is authorized to establish additional land districts, and to appoint the necessary officers under existing laws wherever he may deem the same necessary for the public convenience in executing the provisions of this chapter. (Act of Congress, July 26, 1866, Ch. 262, Sec. 7.)

“ Sec. 2344. Nothing contained in this chapter shall be construed to impair, in any way, rights or interests in mining property acquired under existing laws; nor to affect the provisions of the act entitled, ‘ An act granting to A. Sutro the right of way and other privileges to aid in the construction of a draining and exploring tunnel to the Comstock lode, in the State of Nevada,’ approved July twenty-

five, eighteen hundred and sixty-six. (Act of Congress, July 9, 1870, Ch. 235, Sec. 17; May 10, 1872, Ch. 152, Sec. 16.)

“Sec. 2345. The provisions of the preceding sections of this chapter shall not apply to the mineral lands situated in the States of Michigan, Wisconsin and Minnesota, which are declared free and open to exploration and purchase, according to legal subdivisions, in like manner as before the tenth day of May, eighteen hundred and seventy-two. And any bona fide entries of such lands within the States named since the tenth day of May, eighteen hundred and seventy-two, may be patented without reference to any of the foregoing provisions of this chapter. Such lands shall be offered for public sale in the same manner, at the same minimum price, and under the same rights of pre-emption as other public lands. (Act of Congress, Feb. 18, 1873, Ch. 159, V. 17, p. 465.)

“Sec. 2346. No act passed at the first session of the Thirty-eighth Congress granting lands to States or corporations, to aid in the construction of roads or for other purposes, or to extend the time of grants made prior to the thirtieth day of January, eighteen hundred and sixty-five, shall be so construed as to embrace mineral lands, which in all cases are reserved exclusively to the United States, unless otherwise specially provided in the act or acts making the grant. (Act of Congress, Jan. 30, 1865.)

“Sec. 2347. Every person above the age of twenty-one years who is a citizen of the United States, or who has declared his intention to become such, or any association of persons severally qualified as above, shall, upon application to the register of the proper land office, have the right to enter, by legal subdivisions, any quantity of vacant coal lands of the United States, not otherwise appropriated or reserved by competent authority, not exceeding one hundred and sixty acres to such individual person, or three hundred and twenty acres to such association, upon payment to the receiver of not less than ten dollars per acre for such lands, where the same shall be situated more than

fifteen miles from any completed railroad, and not less than twenty dollars per acre for such lands as shall be within fifteen miles of such road. (Act of Congress, March, 3, 1873, Ch. 279, Sec. 1.)

“ Sec. 2348. Any person, or association of persons, severally qualified as above provided, who have opened and improved, or who shall hereafter open and improve, any coal mine or mines upon the public lands, and shall be in actual possession of the same, shall be entitled to a preference right of entry under the preceding section, of the mines so opened and improved; provided, that when any association of not less than four persons, severally qualified as above provided, shall have expended not less than five thousand dollars in working and improving such mine or mines, such association may enter not exceeding six hundred and forty acres, including such mining improvements. (Acts of Congress, March 3, 1873, Ch. 279, Sec. 2.)

“ Sec. 2349. All claims under the preceding section must be presented to the register of the proper land district, within sixty days after the date of actual possession, and the commencement of improvements on land, by the filing of a declaratory statement therefor; but when the township plat is not on file at the date of such improvement, filing must be made within sixty days from the receipt of such plat at the district office; and when the improvements shall have been made prior to the expiration of three months from the third day of March, eighteen hundred and seventy-three, sixty days from the expiration of such three months, shall be allowed for the filing of a declaratory statement, and no sale under the provisions of this section shall be allowed until the expiration of six months from the third day of March, eighteen hundred and seventy-three. (Act of Congress, March 3, 1873, Ch. 279, Sec. 3.)

“ Sec. 2350. The three preceding sections shall be held to authorize only one entry by the same person or association of persons; and no association of persons, any member of which shall have taken the benefit of such sections, either

as an individual or as a member of any other association, shall enter or hold any other lands under the provisions thereof; and no member of any association which shall have taken the benefit of such sections, shall enter or hold any other lands under these provisions; and all persons claiming under section twenty-three hundred and forty-eight, shall be required to prove their respective rights, and pay for the lands filed upon within one year from the time prescribed for filing their respective claims; and upon the failure to file the proper notice, or to pay for the land within the required period, the same shall be subject to entry by any other qualified applicant. (Act of Congress March 3, 1873, Ch. 279, Sec. 4.)

“Sec. 2351. In case of conflicting claims upon coal lands where the improvements shall be commenced, after the third day of March, eighteen hundred and seventy-three, priority of possession and improvement, followed by proper filing and continued good faith, shall determine the preference right to purchase. And also when improvements have already been made prior to the third day of March, eighteen hundred and seventy-three, division of the land claimed may be made by legal subdivisions, to include, as near as may be, the valuable improvements of the respective parties. The commissioner of the general land office is authorized to issue all needful rules and regulations for carrying into effect the provisions of this and the four preceding sections. (Act of Congress, March 3, 1873, Ch. 279, Sec. 5.)

“Sec. 2352. Nothing in the five preceding sections shall be construed to destroy or impair any rights which may have attached, prior to the third day of March, eighteen hundred and seventy-three, or to authorize the sale of lands valuable for mines of gold, silver or copper. (Act of Congress, March 3, 1873, Ch. 279, Sec. 6.)

“Amendment to Sec. 2326. That if title to the ground in controversy shall not be established by either party, the jury shall so find, and judgment shall be entered according to the verdict. In such cases costs shall not be allowed

to either party, and the claimant shall not proceed in the land office or be entitled to a patent for the ground in controversy until he shall have perfected his title. (Act of Congress, March 3d, 1881, Chap. 140.) (The adverse claim required may be verified by the oath of any duly authorized agent or attorney-in-fact of the adverse claimant cognizant of the facts stated; and the adverse claimant if residing or at the time beyond the limits of the district wherein the claim is situated, may take oath to the adverse claim before the clerk of any court of record of the United States or of the State or Territory where the adverse claimant may then be, or before any notary public of such State or Territory. Applicants for mineral patents, if residing beyond the limits of the district, wherein the claim is situated, may make any oath or affidavit required for proof of citizenship before the clerk of any court of record, or before any notary public of any State or Territory (Act of Congress, April 26, 1882, Ch. 106, Secs. 1, 2).

“Whenever any lands containing valuable mineral deposits shall be vacated by the reduction or abandonment of any military reservation under the provisions of this act (an act to provide for the disposal of abandoned and useless military reservations, approved July 5, 1884) the same shall be disposed of exclusively under the mineral land laws of the United States (Act of Congress, July 5, 1884, Chap. 215, Sec. 5).”

The consideration of “The local laws of the States and Territories” need not occupy much time or space in this lecture. California has made no attempt, at any time, to enact a mining code. At times, special laws were passed providing how mining claims could be conveyed, taxing aliens for the privilege of mining, giving mining on the public lands a preference over agricultural occupation, protecting growing crops and inclosures from trespasses by miners, etc. Nevada formulated and adopted a mining code of forty-seven sections in 1866 and repealed it at the first opportunity in 1877. The State of Oregon has fol-

lowed the policy of California and "let well enough alone."

In 1855 Arizona essayed a Mining Code for that Territory; and the Territory of Colorado followed the example in 1861. Montana and Dakota have mining codes fashioned after that of Colorado. I am unable to state with certainty whether Utah, New Mexico and Washington Territory have enacted mining codes or not. The modern tendency of the average member of territorial legislative assemblies, is to set "his mark" on all human laws by altering or amending them out of recognition, and making their proportions grotesque and their meaning startlingly absurd. Mining codes in particular, suffer from the prevalent disposition to "alter" and "amend" at every opportunity. The Ten Commandments and the Lord's Prayer have escaped innovation by modern legislators thus far and the religious world has reasons to be grateful. In our days, laws multiply and change with fearful rapidity in this territory. In 1877 the laws of Dakota were codified and formed one volume of 940 pages and 36 pages of index, including the constitution of the United States. In ten years another codification was made which has recently been issued in one volume of 1254 pages, 33 pages of appendix and 174 pages of an index. If it is true that the best governed people are those who are governed the least, Dakota is not making headway in the right direction. To borrow a truism from President Lincoln, which he applied to the payment of the public debt, it is easier to observe and obey a great many laws than a greater number. Many, aye! very many estimable persons of these latter days, are seriously inclined to look to legislation as the panacea for all the ills of society; and that all conditions and interests should be regulated by statute laws. It gives rise to the necessity of learning what is the law one day, and unlearning it the next.

The mining code of Dakota as now codified, consists of forty-nine sections, and it will require a good memory in the miner who can commit it "to heart." Not so with

the usages and customs he learned at miners' meetings, at the bar and diggings, where he learned to mine. The mining camp itself was to him, a school where the traditions and rules of miners were taught and applied. So far as I can now call to mind but few miners have represented the Black Hills in the Legislative Assemblies of this Territory, so they can be acquitted of the charge of asking for innovations in existing laws.

MINERS VS. LAWYERS.

In early days in many mining districts in California, Oregon, Nevada and Colorado, lawyers were expressly forbidden by the miners' rules from residing therein or practicing their profession. They were as unceremoniously hustled out of camp as professional claim-jumpers were, and as dreaded as a contagion. The average "honest miner" had but little use for a "limb of the law," who attempted to practice his profession in the mining camp. If he confined his energies to "running some game of chance or preaching a funeral oration when the occasion required one," he was tolerated. Disputes were usually settled at miners' meetings, called on short notice, where the disputants were heard orally, as well as their witnesses and a summary judgment rendered from which there was no appeal. I have witnessed a number of miners' meetings in '62-3 and 4 in Oregon and Idaho, and for fair play, impartiality, and natural justice, I have never seen them surpassed in established courts of law. There were in none of them the laws delay and the bill of costs.

Lawyers were looked upon as fomenters of discord, individuals who throve best when there were the most quarrels, and always at some one else's expense. But when he took to the pick, pan and shovel, sunk down to the bed rock and found "colors" and was otherwise worthy, he had the honors of the camp thrust upon him. Some of these lawyers have attained to the highest executive, legislative and judicial dignities in the mining States. The

most lasting good feeling has existed between them and the old miners. This feeling of distrust that I speak of, has largely disappeared in the past twenty years, owing, no doubt, to the passage of the mining laws by Congress which required judicial interpretation in the established courts of law, where lawyers "most do congregate," and where mining controversies are now settled. And lawyers who believe that their client is thrice armed with a just quarrel relating to his claim, rarely object to an honest miner as a juror to decide the dispute.

LECTURE NO. VI.

DISCOVERY AND APPROPRIATION OF LODE AND PLACER CLAIMS.

The word "discover" — according to Webster and Worcester — is of French origin and signifies to "uncover," "lay bare," or "make known" something that is already in existence and not generally known before. We speak of Columbus having discovered America, of Newton having discovered the law of gravitation, of Harvey having discovered the circulation of the blood, which after all is merely making generally known a thing or a quality already existing. But with respect to land, or an interest in it, or in its incidents, no proprietary consequences flow from the naked discovery, unless accompanied by appropriation or occupancy. It is almost a historical certainty, that the New England coast was discovered about the year 1000, A. D., by Norwegian navigators who did not appropriate or occupy the country but made the fact known to the Northmen of Europe. It is also claimed that Irish sailors some centuries before this, under St. Brendan, landed on what is now the coast of Virginia, and penetrated into the interior until they met a large river flowing the direction of the setting sun. Some old documents are said to exist in the Vati-

can library at Rome justifying a belief that St. Brendan and some sailors, at some time in the misty past, did sail from the west coast of Ireland, out on the broad bosom of the Atlantic, and, after a long absence, returned and made a report of their voyage and discoveries. The new country was called St. Brendan's Land. A second trip was attempted but the voyagers never returned. The large river flowing westward is supposed to be the Ohio. In neither case was the new country claimed by the discoverers. When Columbus first landed on the Island of St. Salvador he took possession in the name of the Crown of Castile, and Spain occupied the island under his claim of discovery ever since. England, France and Holland subsequently discovered other parts of the new world and took possession of the same, and their respective claims were acknowledged by the nations. Discovery and conquest always were recognized as means of acquiring landed interests by the law of nations. Unknown lands belong to the country to which the discoverer owes allegiance, if taken possession of in its name by him. This is usually done by landing on the shore of the island or country, hoisting the flag or other emblem of sovereignty and dominion, and by making a declaration of some kind, of claim to it. Should a navigator make a discovery of a new island or country and sail away from it without making a claim, or doing some external act to denote his intention of claiming it, the law of nations will not uphold his government in asserting a claim to it, after it has been taken possession of by some other country. So, the law of discovery will apply to mines and mining claims. Discovery is the result of search or accident. And in either case, to avail as the basis of a property right, it must be followed by an asserted claim to the thing discovered, and the intent must be made manifest by external evidence of acts, that silently convey their meaning to others. If there is external evidence of the claim to the thing discovered, then the rules and usages of the natural law recognize the prior right of the discoverer, who thus gives notice, as being stronger than that of one

who subsequently attempts to make a claim to the same thing.

Applied to mining claims on the public domain this is what is understood, when the courts declare that "discovery and appropriation are the source of title." Congress has said: "All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found, to occupation and purchase by citizens," etc. (Mining Law, Sec. 2319.) The license to explore is more broad than some of the earlier decisions of State and territorial courts would seem to indicate. Stress is laid by them that the land must be "public" and "unappropriated," while the law declares "in lands belonging to the United States." Pre-emptions, homestead entries and timber culture entries do not alter the ownership of the lands until purchase, or final entry has been made at the Land Office. Until this happens the lands belong to the United States; and if there are valuable mineral deposits therein, the opinion prevails that they are as free and open to exploration as if not occupied.

Before the Act of May 10, 1872, the manner of locating claims — placer and quartz, was regulated by the local rules, and the usage and customs of the miners of the mining district in which the claim or claims, was situated. But that act in explicit terms forbids the location of a (vein or lode) claim until the discovery of the vein or lode has been made within the limits of the claim. In other words the location cannot have effect until after the discovery. The Supreme Court of Montana Territory tersely declared in the case of *Upton v. Larkin* (6 Mont. 66): "If a discovery is made, the right of location follows. Discovery is a condition precedent to location." The marking the boundaries of a claim, or the posting of a notice of location, will have no legal effect until the valid discovery has been made of the vein or lode within the surface lines. "It is a mistake," says the Supreme Court of Nevada, "to suppose that mining ground cannot be located if some other

claimant has put stakes around it.” The Supreme Court of Montana says: “ Possession within a mining district, to be protected, or to give vitality to a title, must be made in pursuance of the law and the local rules and regulations. It must stand upon the law, and be the result of a compliance therewith. * * *

“ Possession without location carries no title. The mere naked possession of a mining claim upon the public lands is not sufficient to hold such claim as against a subsequent location made in pursuance of the law, and kept alive by a compliance therewith.” *Hopkins v. Noyes* (Mont., 2 Pac. Rep. 281). The first claimant may not be a citizen, or otherwise capable of holding against a qualified locator, and he may not have complied with other requirements of the law, which are just as essential as the marking of boundaries. He may have forfeited, or he may have abandoned his claim. In any such case the ground is open to any citizen of the United States as completely as if no stake had ever been planted upon it.” (*Golden Fleece Co. v. Cable Co.*, 12 Nev. 323.)

The Supreme Court of the United States say that “ The right to the possession comes only from a valid location. Consequently if there is no location, there can be no possession under it. Location does not necessarily follow from possession, but possession from location. A location is not made by taking possession alone, but by working on the ground, recording, and doing whatever else is required for that purpose by the acts of Congress, and the local laws and regulations.” (*Belle v. Meagher*, 104 U. S, 284).

“ A location to be effectual must be good at the time it is made. When perfected it has the effect of a grant by the United States of the present and exclusive possession.” (*Id.* 285.)

The same court defines mining a claim and location thus: “ A mining claim is a parcel of land containing precious metals in its soil or rock. A location is the act of appropriating such parcel, according to certain established rules. It usually consists in placing on the ground, in a conspicu-

ous position, a notice setting forth the name of the locator, the fact that it is thus taken or located, with the requisite description of the extent and boundaries of the parcel, according to the local customs, or, since the Statute of 1872, according to the provisions of that act. Rev. Stat., Sec. 2324." (*Smelting Co. v. Kemp*, 104 U. S. 649.)

The "discovery" is the initial point from which the claim is made and measured, and the essential thing upon which the location is based. Without it the other acts of location are mere nullities. While the United States mining laws do not require the posting of a location notice at or near the discovery, on the ground, or that a record shall be made of the location, the usual regulations of the miners do, as the last case cited shows. The miners of each mining district are authorized by Congress "to make regulations governing the location and manner of recording" not in conflict with the laws of the United States, or with the laws of the State or Territory in which the district is situated. (*Id.*, Sec. 2324.) Aside from implication, I find no authority from Congress to State or Territory to make similar regulations although, they have done so; and the query may reasonably be made: to whom did Congress delegate the power of making such regulations? To the miners of each mining district, or to the local legislatures? Clearly to the miners of each mining district. As already stated the legislature of California did not at any time attempt to make regulations of this character, but left the matter to miners in each district. Nevada attempted such legislation once but repealed it at the first opportunity thereafter. Is this delegation of power exclusive? May the States and Territories also, make regulations governing locations and the manner of recording mining claims? If the miners are first in the field with their regulations in accordance with the power granted, will subsequent legislation by the State or Territory inconsistent with the miners' regulations have the effect of multiplying them? Again; may the authority of either in the matter of the

making such regulations be extended by implication to equal or include that of the other? The State or Territory has no power to authorize exploration on the public lands belonging to the United States, nor to occupy or purchase the same. Why should it, therefore, without express authority from Congress, have power to make regulations as to the steps necessary to be taken by the miner before his claim is perfected?

The United States mining law recognizes the rules and customs of the miners in recording their claims, and it provides that "All records of mining claims hereafter made, shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim." (Rev. St., Sec. 2324.)

In the *Golden Fleece Co. v. Cable Consolidated Co.* cited before, the point was in issue whether a record of a mining claim was necessary. The Court held: "Proof of a record is totally irrelevant without proof of some regulation making a record obligatory, or giving it some effect. The public law does not of itself create any such office as mining recorder. Neither does it make the recording of claims obligatory, or give to a record any effect. This is a matter left to the miners of the respective districts. If they make no rules requiring a record, none is required; if they give no effect to a record, evidence of a record is irrelevant." The limitation on the powers of the miners of each mining district to make regulations governing location and manner of recording seems to be:—

1. The regulations must not conflict with the laws of the United States, or of the State or Territory in which the district is situated;

2. They cannot dispense with the requirement that "the location must be distinctly marked on the ground so that its boundaries can be readily traced;

3. If a record of the claim is required it "shall contain the name or names of the locators, the date of the location

and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim ;”

4. Less than \$100 worth of work per annum for each claim will not hold it: more may be required.

The mining code of Dakota supplements the United States law by limiting the width of lode claims to one hundred and fifty feet on each side of the center of the vein or crevice ; but authorizes a greater or less width not to exceed the minimum and maximum allowed by Congress, to be determined by a majority of the legal voters of the county at a general election. The policy of changing the width of lode claims is referred to the legal voters of the county by the territorial law and not to the miners of each mining district. (Sec. 2, Mining Code of Dakota.)

The discoverer of a lode is required to record his claim in the office of the Register of Deeds of the county in which the lode is situated within sixty days from the date of discovery, by a location certified which shall contain: (1) The name of the lode; (2) the name of the locator or locators; (3) the date of the location; (4) the number of feet in length claimed on each side of the discovery shaft; (5) the number of feet in width claimed on each side of the vein or lode; (6) the general course of the lode as near as may be; (7) and such a description as shall identify the claim with reasonable certainty. (Sec. 3 and 4 Id.) The measurement of the claim is to be from the discovery, along the course of the vein, so many feet on one side, so many on the other; or the full length may be taken on one side only. But two claims cannot be taken on the same vein or lode for one discovery.

If the location certificate does not contain the foregoing requirements the law says it shall be void: that is, shall not be legal evidence of the facts therein cited. But if any of these things are omitted from it, it can be remedied by recording an amended or additional certificate containing the omitted matters. (Mining Code Dak., Section 13.)

The Congressional prerequisites to locating a mining claim are: —

First. The discovery of the vein or lode within the limits of the claim located. (U. S. Rev. Stat., Sec. 2320.)

Second. The location must be distinctly marked on the ground so that its boundaries can be readily traced. (Id. Sec. 2324.)

Third. Where a record of the claim is required, it shall contain the names of the locators, the date of the location and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. (Id., Sec. 2324.) These are essential to a valid mining location. No local rule or regulation may alter, amend or dispense with them.

The Mining Code of Dakota prescribes the four certain things to be done to perfect a location:—

First. By sinking a discovery shaft thereon, sufficient to show a well-defined mineral vein or lode.

Second. By posting at the point of discovery on the surface a plain sign or notice containing (1) the name of the lode, (2) the name of the locator, (3) the date of discovery, (4) the number of feet claimed in length on either side of the discovery, and (5) the number of feet in width on each side of the lode.

Third. Marking the boundaries of the claim.

Fourth. Marking and recording a location certificate containing the name of the lode, the name of the locator or locators, the date of the location, the number of feet in length claimed on each side of the discovery shaft, the number of feet in width claimed on each side of the vein or lode, the general course of the lode as near as may be, and such a description as shall identify the claim with reasonable certainty.

It will be observed that a "location notice" is not the same as a "location certificate," under the local law. The former is required to contain the date of discovery, the latter the date of location. No provision is made for recording or amending the former, and no effect is given

to its failure to contain what the law prescribes. Ordinarily, the locator takes a copy of his location notice and records that as his location certificate. Courts are very liberal in construing location notices and certificates if the other requirements of the law have been observed in making the location. The "physical marks" constituting the boundaries were said to be sufficient notice to one honestly concerned to discover whether or not the land was appropriated for mining purposes. (*Hess v. Winder*, 30 Cal. 349.) This would hardly be considered the law now. In addition to the "physical marks" constituting the boundaries, a discovery of the vein or lode must be made. Sometimes the question as to what constitutes a discovery of the vein or lode, has arisen in the courts, and the tendency has been to give it a liberal construction.

In a recent decision by the Supreme Court of Montana (*Glenn v. O'Donnell*, 19 Pac. Rep.), it was held that the discovery shaft need not necessarily be on the vein, and that if the vein or lode is exposed in some other shaft on the claim, it is sufficient discovery.

In the Eureka Richmond case (4 Saw, 310, 311) Mr. Justice Field approved of the definition of a lode given by Dr. Raymond and adopted it. "The miners," said Dr. Raymond, "made the definition first. As used by miners, before being defined by any authority, the term lode simply meant that formation by which the miner could be led or guided. It is an alteration of the verb Lead; and whatever the miner could follow expecting to find ore was his lode; some formation within which he could find ore, and out of which he could not expect to find ore, was his lode."

In the same case, the Court said:—

"Those acts (Acts of Congress, 1866 and 1872) were not drawn by geologists or for geologists; they were not framed in the interests of science, and consequently with scientific accuracy in the use of terms. They were framed for the protection of miners in the claims which they had located and developed, and should receive such construction as will carry out this purpose. The use of the terms veins and

lodes in connection with each other in the act of 1866 and their use with the term ledge in the act of 1872, would seem to indicate that it was the object of the legislator to avoid any limitation in the application of the acts, which a scientific definition of any one of the terms might impose.

“It is difficult to give any definition of the term as understood and used in the acts of Congress, which will not be subject to criticism. A fissure in the earth’s crust, an opening in its rocks and strata made by some force of nature, in which the mineral is deposited, would seem to be essential to the definition of a lode in the judgment of geologists. But to the practical miner the fissure and its walls are only of importance as indicating the boundaries within which he may look for, and reasonably expect to find the ore he seeks. A continuous body of mineralized rock lying within any other well-defined boundaries on the earth’s surface and under it, would equally constitute, in his eyes, a lode. We are of the opinion, therefore, that the term as used in the acts of Congress is applicable to any zone or belt of mineralized rock lying within boundaries clearly separating it from the neighboring rock. It includes, to use the language cited by counsel, all deposits of mineral matter formed through a mineralized belt coming from the same source, impressed with the same forms and appearing to have been created by the same processes.”

It may be said that every form of valuable mineral deposits, except placers, is a lode.

Owing to the greater friability of gold and silver lodes over the inclosing rocks, they crumble more readily from atmospheric causes than the adjoining country rock. The melting snows and falling rains carry the disintegrated pieces to a lower level on the surface, from the croppings of which they once formed part. When they are moved by the agencies mentioned, gravity forces them lower. A hill-side may be strewn with these indications of the existence of a vein or lode in the vicinity, and the croppings from which they have been separated may be covered by the soil. The

prospector with his keen eye will instantly detect this float by its outward appearance, and if satisfied with its metallic character, will prospect for the lode. It may take weeks or months to find it. But while he is engaged honestly and diligently in searching for it, in the locality where he found the float, he will be entitled to the protection of the law from having his possession invaded until he has completed his discovery of the lode, for a certain definite period.

The Supreme Court of Utah held in the case of *Harrington v. Chambers* (3 Utah, 115), "whenever a prospector has discovered such indications of mineral that he is willing to spend his time and money in following, in the expectation of finding ore, a valid location of a mining claim may be made of a ledge deep in the ground and appearing at the surface in the shape of ore, but in vein matter only."

The Supreme Court of Montana in the case of *Foote v. National M. Co.* (2 Mont. 402) held that in order to have "a valid discovery the lode must be identified and one wall of it discovered."

The Supreme Court of Dakota in the case of the *Golden Terra Mining Co. v. Smith et al.* (2 Dakota, 403), opinion by Moody, J.:—

"I am inclined to adopt and do adopt, the rule of the practical miner and prospector, that the vein is discovered when there is disclosed a well-defined body of rock in place carrying gold, which body subsequently proves to be continuous."

The policy of the law is clearly stated by the United States Supreme Court in the case of *Erhardt v. Boava*, 113 U. S. 535, in which they say:—

"In all legislation, whether of Congress or of the State or Territory, and by all mining regulations and rules, discovery and appropriation are recognized as the sources of title to mining claims, and development by working as the condition of continued ownership, until a patent is obtained. And whenever preliminary work is required to define and describe the claim located, the first discoverer must be protected in the possession of the claim until suffi-

cient excavation and development can be made, so as to disclose whether a vein or deposit of such richness exists, as to justify work to extract the metal. Otherwise the whole purpose of allowing the free exploration of the public lands for the precious metals would in such cases be defeated, and force and violence in the struggle for possession instead of previous discovery would determine the rights of claimants.”

LECTURE NO. VII.

MODE OF LOCATING PLACER AND LODE CLAIMS ON THE PUBLIC LANDS.

Necessarily, little remains to be said under this head. The public mineral lands of the United States, by the bounty of the Government, are free and open to exploration to citizens and those who have declared their intention to become such. So long as this license to explore remains unrevoked qualified persons may go upon the public mineral lands which have not been appropriated under the mining law by others, and if they discover valuable mineral deposits, locate the same. The extent of the placer claim locatable for one person may equal, but cannot exceed twenty acres; but one hundred and sixty acres of placer ground may be located in one tract by eight qualified locators. If the land is surveyed it must be taken up according to the legal subdivisions; if not the boundaries must be distinctly marked upon the ground so that they can be readily traced. This is done by marking the corners and sides of the claim with good, substantial posts, or mounds of earth or rocks or, where they exist, blazing trees, at proper distance from each other, and marking the stakes, mounds, or trees in such manner that other prospectors may have reasonable means of knowing what ground the previous one claims. It has been said that the

locator of a claim owes a duty to subsequent explorers, and that he should further the public policy of the country, which encourages the development of its mineral resources, by keeping up the stakes and monuments marking its boundaries, and the notice of his claim. If this is done other explorers will not trespass upon prior appropriations. The work and development of the locator will also serve as a notification of recent or remote occupation. In the case of lode claims the discovery is the initial point. At or near it, the locator should post his location notice setting forth the direction, and the number of feet in length on each side of the discovery point, that he claims, which should not exceed 1500 feet. But he may claim the entire length on one side only. The width allowed by law should be claimed from the middle of the vein at the surface, when that can be determined. "The middle of the vein at the surface" is the line which the United States law fixes from which the width of the claim shall be determined. (U. S. Rev. Stat., Sec. 2320.) The Dakota Code uses the words, "from the center of the vein or crevice," which is the same thing. At each corner of the claim the point should be marked by a substantial post, mound or monument indicating in some manner what point it is — as "N. W. Cor. Homestake Lode," or, "S. E. Cor. De Smet Lode." This will at once apprise the ordinary prospector in the locality of the claim, what ground is claimed. Our territorial law prescribes eight stakes or monuments to mark the boundaries, but attaches no ill consequences if a less number only are used. One at each corner, and one at the center of each side and end line are directed to be firmly placed in the ground. It is always better to strictly observe this direction, as then there can be no objection that the claim is not distinctly marked on the ground. It has been held in Nevada that a lode claim is distinctly marked or sufficiently marked with these stakes; one at the center of each end line and one at the center of the claim — marking the center line of the claim; that the statutory width can be as readily determined from this line as if the exterior bound-

aries were staked, providing a notice is posted on one of them showing that the locator claims their length as the center line of his claim and the specified width on either side of it. (*North Noonday Mining Co. v. The Orient Mining Co.*, 1 Federal Rep. 522.)

It may be said that when the locator has posted his notice and staked his claim, that he has, so far as his power goes, appropriated the ground included within the boundaries. Until the boundaries have been distinctly marked no specific area of mining ground has been appropriated. The prospector is not monarch of all he surveys. He can take only what the Government proposes to give him — “the exclusive right of possession and enjoyment of all the surface ground within the lines of his location,” etc. The lines must be fixed before the right of exclusive possession can attach to the surface ground within. He has by the local law sixty days from the time of disclosing the vein or lode to sink the discovery shaft thereon sufficient to show a well defined mineral vein or lode, or to run an open cut, cross cut, or tunnel at a depth sufficient to disclose it, or to run an adit of at least ten feet in length along the vein from the discovery. No additional work or improvement need be done on the claim for that calendar, or discovery, year; but the next and each subsequent calendar year will require work or improvement of not less than one hundred dollars in value to be performed on the claim to sustain its validity. He has sixty days also, from the date of discovery, to record his claim in the office of the register of deeds of the county in which the lode is situated by a location certificate. There is no limit of time within which the miner is required to mark his boundaries, expressly fixed by the general or local law. What time then has he in which to stake? Evidently a reasonable time. Since he may stake and claim the full length, 1,500 feet, on one side or on the other of his discovery point, or take a portion on one side and a portion on the other to equal 1,500 feet, he must make his selection within a reasonable period after discovery, or he would be able to monopolize

3,000 feet in length by his indecision for an unreasonable time, to the prejudice of other prospectors and locators, if the rule of reasonable time did not apply. The marking in the first instance may be preliminary or what is known among old miners as "picket" staking. But before the record of the claim is made the permanent boundaries must be established, otherwise, the description required to be in record would not identify the claim. After the record is made, no changing of the stakes is permissible, except the recording of another location certificate by relocation of the claim and as provided by law; and a relocation implies that all the acts of location have been done anew. Under the local law, however, the original stakes may be adopted by the relocater. This is done usually by remarking them. A new discovery stake must be erected in the case of relocation and a new discovery shaft sunk; or the relocater may sink the original shaft, cut, or adit to a sufficient depth to comply with the provisions of sections five and seven of the Mining Code of Dakota. In every case the relocation certificate should state the fact of its being a relocation, and whether the whole or a part of the new location is located as abandoned property. A relocation being a new location takes effect only from its date. An amended location certificate relates back to the original if made before adverse rights attach, and together with the original constitute the location. It is also called an "additional certificate." (See case of *Strepey v. Staek* of Colorado, 614; *McGinnis v. Egbart*, 8 Id. 41; *McEvoy v. Hynman* (Circuit Court Colorado), 25 Federal Rep. 600.

Placer claims in an original mining district, where the customs and usages of miners prevail, or where rules and regulations of miners are in force, are usually limited as to extent as so many feet — say 300 — up and down the gulch, and in width from rim rock to rim rock. The first claim on which gold has been discovered is called the discovery claim, and the others are numbered each way from

it, as No. 1 above discovery, or, No. 2 below, the whole length of the gulch or creek.

Whenever and wherever water is obtainable for sluicing purposes, the customs and rules of the miners require one days' work in every week to be done on each claim, in order to hold the same; but if a person has two or more claims that are contiguous he may do all the work on any one of the claims, providing that one full day's work is done for each claim. But when water becomes scarce or is difficult to obtain for sluicing, the miners of the district at a properly called meeting may dispense with the representation work on placer claims by a "lay over" resolution, which authorizes the owner to lay over his ground until the next season. This is done by having the mining recorder make a record thus:—

“Claim No. 10 above discovery laid over until the first of May next for want of water to work with.”

JOHN DOE.

LECTURE NO. VIII.

OCCUPATION AND POSSESSION AFTER LOCATION, BY DEVELOPMENT FROM YEAR TO YEAR.

When a locator has completed the location of his mining claim on the public mineral lands, his right of exclusive possession and enjoyment of the surface of the same attaches at once, and continues so long thereafter, as he complies with the United States law, and the laws of the State or Territory and the local regulations not in conflict with them.

He is not required to reside on his claim, nor to work and develop the same—except to do, each calendar year of location, \$100 worth of labor by improvement on it. The right to the possession comes from a valid location in the first instance, and the continued right of occupancy comes from doing annually the work required by law, and

he may appropriate the minerals therein. The United States Supreme Court in the case of *Belk v. Meagher* (104 U. S. 285) in speaking of a mining location, say: "When perfected it has the effect of a grant by the United States of the present and exclusive possession."

Again: "Congress has seen fit to make the possession of that part of the public lands which is valuable for minerals, separable from the fee; and to provide for the existence of an exclusive right to the possession, while the paramount title to the land remains in the United States." (Id. 283.)

Once the right of exclusive possession attaches to the locator of a claim, it continues thereafter so long as the law remains in force, and the annual representation work is performed upon, or for the claim. For instance: A number of claims are owned in common or by the same corporation — the annual representation work of not less than one hundred dollars in value for each, may be performed on any one of the group (U. S. Rev. Stat. Sec. 2324); provided, such work is done for the development of all. But if the work has no reference to the development of any particular claim outside of the one where it is being performed, it will not answer for those which are not in some manner improved by it. The rule is clearly stated by the United States Supreme Court in the case of *Smelting Co. v. Kemp* (104 U. S., at page 655), when they say: —

"Labor and improvements within the meaning of the statute, or deemed to have been had on a mining claim, whether it consists of one location or several, when the labor is performed or the improvements are made for its development, that is to facilitate the extraction of the metals it may contain; though in fact such labor and improvements may be on ground which originally constituted only one of the locations, as in sinking a shaft, or be at a distance from the claim itself, as where the labor is performed for the turning of a stream, or the introduction of water, or where the improvement consists of the construction of a flume to carry off the debris or waste material."

The same Court, in the case of *Jackson v. Roby* (109 U.

S. at page 445), say: "It often happens that for the development of a mine upon which several claims have been located, expenditures are required exceeding the value of a single claim, and yet without such expenditures the claim could not be successfully worked. In such cases it has always been the practice for the owners of different locations to combine and to work them as one general claim; and expenditures which may be necessary for the development of all the claims may be then made as one of them. The law does not apply to cases where several claims are held in common, and all the expenditures made are not for the development of one of them, without reference to the development of the others. In other words, the law permits a general system to be adopted for adjoining claims held in common, and in such case the expenditures required may be made, or the labor performed, upon any one of them."

In a later case the same Court approves of these decisions, and explains the policy of the mines anterior to congressional legislation on the subject of mining and the mineral lands; and then states the Government policy, and adds:

"When several claims are held in common, it is in the line of this policy to allow the necessary work to keep them all alive, to be done on one of them. But obviously on this one the expenditures of money or labor must equal in value that which would be required on all the claims if they were separate or independent. It is equally clear that in such case the claims must be contiguous, so that each claim thus associated may in some way be benefited by the work done on one of them."

The money expended in running a tunnel for the development of a lode or lodes by the owner or owners will be taken and considered as expended on the lode or lodes. (U. S. Rev. Stat., Sec. 2324.)

It is well to remember that the work and improvement annually required to be done on a mining location, must relate to its development in a mining sense. To build reduction works or mills for crushing quartz would be with-

in the purview of the policy of the Government, to encourage mining on its public lands and the extraction of its precious metal; while the erection of buildings for trade and commerce would not. Neither would the cultivation of the surface of the ground into fields of waving grain, or orchards of golden fruit, meet the requirement of labor and improvement on the claim in the sense of the act of Congress. It must be labor and improvement intended to aid, if not actually resulting in, the production of the metallic wealth in the ground.



NATURAL RESOURCES OF THE BLACK HILLS.

BY WALTER P. JENNEY, G. M., IN 1876.

WATER.

To a settler in a new country no question is of greater importance than the purity and abundance of the supply of water; and in this respect the Black Hills are unequaled by any region in the "Great West."

A glance at the map shows, by the innumerable branches of the creeks and the intricate nature of the topography, that it is an extremely well-watered country. Springs are found in almost every ravine. Nearly all the small head branches of the creeks are running brooks of pure water; and streams of considerable size, and but a few miles apart, drain this region, affording a constant and regular supply of water for both stock-raising and mining purposes.

The creeks which drain the gold-fields rise in numerous small springs, issuing from the granite and metamorphic rocks, and the water is consequently remarkably pure and free from mineral or organic matter. Those branches which head in the great Carboniferous limestone, yield water suitable for most domestic purposes, the only drawback being a slight "hardness" due the presence of carbonate of lime, which does not in the least affect the health of those using it.

Only among the foot-hills, where the gypsum of the Red Beds or the "alkali" derived from the Jurassic and Cretaceous shales has contaminated the streams draining these formations, is the water found to be unfit for cooking purposes, and possessing purgative properties. Elsewhere throughout the whole area of the Black Hills included within the timber-line at the edge of the surrounding plains the water both of the springs and running streams is clear,

cold, delicious to the taste, and extremely healthy. Early in June the temperature of the springs at the head of the Floral Valley was found to be 39° F., the elevation being 6,600 feet above the sea. In midsummer the water of a number of springs in the interior of the Hills was tested with an accurate thermometer, and found to vary between 42° and 44° F. After August 1, the past summer, the volume of all the streams in the Black Hills was somewhat diminished by the partial cessation of the heavy rains, but none of the creeks stopped running, except that portion of French creek above the Stockade, where the springs supplying the water are small and the grade very slight. From the character of the geological formations outcropping in the foot-hills and along the edge of the plains, all the streams rising in the Black Hills sink in their beds and disappear before passing through the belt of Carboniferous limestone, with the exception of Rapid creek, which flows into the Cheyenne, and Spearfish and Redwater, which empty into the Belle Fourche. Large springs of good cold water burst out from under the Triassic Limestone in the Red Beds at intervals along the inner rim of the broad Red Valley encircling the Black Hills. These springs will be very valuable to the future stock-raisers in this region, affording watering-places for the stock grazing in the open plains or among the foot-hills.

Spearfish and Redwater pour united a large volume of excellent water into the Belle Fourche, but the shales of the Cretaceous formation through which the river flows soon contaminate the water with alkali, giving it a slightly unpleasant taste, and causing it the past autumn to seriously affect the health of the escort. Probably at other seasons the water of the Belle Fourche deserves its name and reputation, but at the time we were camped on its banks (September 20) the stream was comparatively low and the water contained its maximum of impurities. The South Fork of the Cheyenne is like most of the rivers in the plains, shallow, with a moderate current flowing through a broad, level bottom, yet subject to sudden rise in spring

and early summer. In places it cannot be forded on account of quicksands, even when the river is so low that the water is but a few inches deep.

The water of the Cheyenne is full of suspended mud, and contains traces of alkali derived from clays along its banks.

SOIL.

There is no better way to judge of the fertility of the soil of a new and unsettled region, where the rain-fall is abundant, than to examine the growth and character of the vegetation which it supports.

The Black Hills are an oasis of verdure among the open and level plains. A luxuriant growth of grass spreads over the whole region; even on the rocky hill-sides grass is found growing in the crevices in the rocks wherever there is a particle of soil for its support. A heavy forest covers the greater portion of this area, the trees growing thickly together and attaining full size, not only on the rich bottom-lands of the valleys but on the tops of the level limestone "messas;" and the steep rocky ridges are clothed with pine of good size to their very crests. The soil on the main divides and ridges is not so deep as it is in the parks and valleys which have received the wash from the neighboring hill-sides, and these elevated tracts, being most valuable for grazing purposes, will not be used for cultivation.

Even a casual examination shows that the soil of the valleys, the broad swales of the parks, and the bottom-lands along the creeks is exceedingly rich and deep, being a dark colored loam, resulting from the decomposition of the granite, limestone, and schistose rocks occupying the central area of the Hills. Often in sinking prospecting-pits along the valleys in search of gold, the soil would be found to be a black peaty loam from 2 to 3 feet in thickness, and frequently in the bottom-lands the soil was 4 feet in depth, resting on a gravelly subsoil.

In the parks and along the elevated limestone divide, near

Crook's Tower, are numerous swales of rich grass-land between the low hills and ridges. The soil is deep and fertile, supporting a rank growth of herbaceous plants, but owing to the elevation above the sea and the short growing season of not more than three months, the value of these tracts for cultivation has yet to be proved by experiment. In the valleys of Spring and Rapid creeks are extensive bottom-lands, which would be excellent for farming purposes, did not the underlying gravel contain gold in quantities sufficient to cause it to be mined out in the next few years to the ruin or serious detriment of the land.

The whole valley of Rapid creek, a mile and a half wide, from the foot-hills to the Cheyenne, a distance of 45 miles, is susceptible of irrigation from the stream, which carries at least 3,000 miner's inches of water in midsummer. The soil of this valley is deep and fertile, except near the Cheyenne, among the clay shales of the Cretaceous, where the presence of alkali makes the grass thin and poor.

There are extensive tracts of good farming-lands on the Redwater and Spearfish, near where they unite to form the Deep Water, a branch of the Belle Fourche. Colonel Dodge, the commander of the escort, regarded this locality as admirably suited for a military post.

The soil of the upper valley of the Belle Fourche, from Bear Lodge Butte to the point where it suddenly bends to the southeast, is reported by the topographical party to be excellent, and that broad flats of grass-land skirt its banks for miles. The valley of this stream, below where it is joined by the Deep Water, is injured by the prevalence of black Cretaceous clays and the usual accompaniment of alkali.

The South Fork of the Cheyenne has a broad, level bottom, but generally so little elevated above the water in the stream as to be liable to inundate from floods. In places, however, some very good land is to be found in extensive flats along that stream. Were the Black Hills as densely populated as the State of New Hampshire or Vermont, which they resemble in the character of the

vegetation and climate, a very considerable proportion of the area would be subjected to cultivation. But the amount of arable land, or rather land that will in the next quarter of a century be cultivated in this region, is small, compared with the whole area of fully six thousand square miles embraced in the Black Hills. There is good land enough in the bottoms of the streams, suitable for cultivation, to amply support the population, which will remain in the Hills after the present excitement shall have subsided, and stock-raising become an established occupation.

Including the bottom-lands of the Cheyenne and the Belle Fourche, and the arable land along the valleys of the streams issuing from the Black Hills, I estimate that not less than one-twentieth of the whole area is susceptible of cultivation, the remainder being covered by forest or forming stock-ranges of the finest description.

WILD FRUITS.

The fruits found growing wild in the Black Hills are an evidence of the adaptability of the country for raising the more valuable cultivated varieties, and hence I propose to consider the wild fruits which were found in this region much more in detail than they would otherwise deserve. The most useful is the red raspberry, which was found in large patches in the vicinity of Terry's Peak, at an elevation of 6,500 feet above the sea. The plant is rather dwarf in size, the bearing canes being about two feet high, and August 15 were loaded with delicious fruit, resembling very closely the cultivated variety "Knevit's Giant" in size, flavor, and productiveness.

A variety of black gooseberry was abundant on the western side of the Hills, near Inyan-kara; the fruit was of a pleasant acid flavor and of good size, only differing from the ordinary Western wild gooseberry in being blue-black in color, instead of dark red.

Several species of currants, including the black, red, and fetid varieties, were occasionally seen, but are valueless.

The wild Western strawberry grows throughout the Hills. It is a very shy bearer, and the fruit is deficient in flavor.

The bunch-berry, or cornel (*Cornus canadensis*), was found in the extreme northern part of the Hills. I have never seen it elsewhere, except in Maine and Nova Scotia.

Service-berries (*Amelanchier canadensis*) were quite plenty on Spring and Rapid creeks in July. The common wild red plum grows in patches among the foot-hills, along the bottoms of the ravines. The fruit was ripe about September 20.

The only variety of grape noticed was a kind of frost-grape, found along the banks of the streams, near the edge of the plains.

Quite extensive patches of the two varieties of hazelnuts were observed in the southeastern part of the Hills, associated with alder, white birch, iron-wood, white elm, burr-oak, sumac, the poison ivy (*Rhus toxicodendrum*), the Virginia creeper, and many other plants of wide range and distribution.

Wild flax and wild hops attain a rank and luxuriant growth on the bottom-lands along the streams, and the soil and climate seem to be remarkably well suited to the growth of the plants.

The flora of the Black Hills bears quite a resemblance to that of Southern Maine and New Hampshire in the same latitude, and it is probable that many of the agricultural productions, fruits, and vegetables which can be grown in perfection there will also succeed in favorable portions of this region. The luxuriance with which the heavily-seeded grasses known commonly as "wild rye," "cheat," and "wild oats" grow on the rich bottoms along the eastern slope, would indicate that an equally rank growth of the cultivated cereals and grasses is to be expected. Except at a low elevation among the foot-hills near the edge of the plains, the nights will probably be found too cool for the successful growth of Indian corn, which is a tropical plant, but oats, rye, barley, and wheat should yield well,

and potatoes of the best quality may be produced in the fertile valleys.

GRAZING.

The grazing in the Black Hills is most excellent. Nine-tenths of the whole area is covered by a thick growth of the finest wild grasses. It constitutes the great future wealth of this region, and its value can hardly be overestimated.

Every one who visited the Hills the past season was enthusiastic over the luxuriance of the grass, which in the brightest green spreads over the surface of the parks, hillsides, and valleys, adding greatly to the beauty of the scenery.

Calvary officers, herders, scouts and miners all were united in praise of the grazing. "California Joe" said of the valley of Spring Creek: "There's gold from the grass roots down, but there's *more gold* from the grass roots *up*." And no matter how rich the gold-placers in the Black Hills may prove to be, the great business in this region in the future will be stock-raising and dairy-farming.

Owing to the heavy dews at night during the growing season, to the frequent thunder-showers, and the occurrence of occasional long and heavy rains, the grass grows all over the Black Hills wherever it can obtain a particle of soil for its support and a few hours' sunshine during the day.

Even in the clefts of the rocks, the sides of the steep ridges, and in the bottoms of the deep canyons, grass is found growing, depending on the scanty soil for its sustenance, and the little sunlight that pierces through the dense branches of the trees or penetrates for a short time the depths of the gorge.

Unlike the grass on the plains, which springs up in May and by July has turned yellow and cured to a natural hay, the grass in the Black Hills, stimulated by the abundance of moisture, continues growing all through the summer, remaining always fresh and green until its growth is checked by the frosts of autumn.

When the expedition reached the Hills, about June 1, spring was well advanced. The trees on the foot-hills were in full leaf, and the grass had evidently been growing for several weeks. On the top of the Beaver creek plateau, at an elevation of 6,000 feet above the sea, the grass (June 5) was six inches high, and covered the whole surface of the public mesa, growing thickly under the shade of the pine forest, even to the very roots of the trees, giving the region the appearance of a smooth, well-kept lawn, with tall pines rising from the green carpet of grass.

The grasses in the Black Hills are almost endless in variety, every condition being so extremely favorable to their growth. In the interior of the country the shorter grasses prevail. But among the foot-hills on the rich bottom-lands of Rapid Creek the taller grasses known as "wild rye," "crow's foot," "cheat," and wild oats attain a luxuriant growth. The "grama," or "buffalo grass," covers the valleys at the edge of the plains to the exclusion of the other varieties. It is considered the most nutritious wild grass in the western country, curing to hay on the ground. But, when growing in an alkaline soil, it seems to rapidly lose its nutritive qualities after the seed ripens. Along the banks of the streams, where the soil is marshy, large patches of the scouring rush are found growing. It forms an excellent food for stock, for which they will desert the finest grasses, and feed upon it until they are full and can eat no more.

I had previously been engaged in explorations in Western Texas and New Mexico, but I was surprised at the quantity of the grazing we found in the Black Hills, which resembled the grass growing in the oak-openings in Central Texas, except that it was finer and freer from weeds and the coarser and less nutritious grasses. The escort of the expedition remained camped on French creek for six weeks, and grazing for nearly one thousand horses and mules and three hundred head of cattle was found during that time within a mile and a half of camp, the grass commencing to grow again as soon as it was eaten off by the stock. For

the requirements of the population that the Black Hills will support in the next twenty years, enough hay can be procured from the wild grasses; and should the demand in the future increase, an ample supply can be raised by sowing timothy or other cultivated varieties on the bottom-lands of the valleys. The best localities for hay are in the southeastern part of the Hills, on Amphibious, French, Spring and Rapid creeks, and in the valley of Rapid, between the foot-hills and the Cheyenne, where the taller grasses are abundant on the moist bottoms of the streams and side valleys.

On the plains in the valleys of the Cheyenne and the West Fork of Beaver creek there are localities where sage brush and "prickly pears" cover the alkaline soil, and grass is only to be found in patches. But generally throughout the area of the Black Hills the grass uniformly covers the land, wherever there is soil for its support and the shade is not too dense for its growth. Except among the Red Beds in the foot-hills, sage-brush is never seen and cactus but rarely met with.

Over thickly-wooded areas, and in the mountainous and rocky region about Harney's Peak, the grass is found only in patches in the few localities favorable for its existence. A similar region, comparatively destitute of grass, occurs in the northern part of the hills between Terry's and Crow Peaks, where the whole surface of the country is cut into innumerable canyons, and a species of ground-ivy, called "kinnikinnick," a plant probably of the dog-wood family, replaces the grass.

I estimate the total area of country destitute of grass, or where it only occurs in isolated patches, to be not more than six hundred square miles, or one-tenth the whole area of the Black Hills, the remaining five thousand five hundred square miles constituting some of the best ranges for cattle, horses, and sheep to be found in the whole Western country.

Cattle frequently perish on the plains in large numbers during the severe winters, not so much from the low tem-

perature or intensity of the cold as from the piercing winds, accompanied by sleet or snow, that sweep with resistless fury over the level and unbroken surface of the ground, chilling the animals more than any ordinary degree of cold could possibly affect them in a more sheltered locality. In the Black Hills the winds may blow a gale over the mountain-tops and exposed ridges, but in the valleys the air will be comparatively at rest, the timber covering the hill-sides and ridges materially contributing toward making the valleys warm and sheltered. This will be of great advantage to the stock which may be wintered in the Hills, shelter being found everywhere from sudden or severe storms. The grass exposed on the hill-sides by the snow blowing away or melting, as well as the green twigs of the bushes and trees, will afford subsistence for the cattle during any heavy fall of snow.

The miners who have passed the winters of 1874-'75 and 1875-'76 in the Black Hills, report that the grass remained green at the roots, and afforded good grazing, keeping the stock in good condition, if it were not overworked. Little snow was experienced until the early spring months, when the first heavy falls of snow occurred.

From the secluded and sheltered character of the valleys, the abundance of water, and the fine quality of the grazing, the Black Hills are well adapted for dairy-farming, the establishment of cheese and butter factories and the raising and breeding of fine breeds of cattle and sheep.

The Black Hills are remarkably free from noxious insects, and grasshoppers and locusts are rarely met with in numbers sufficient to cause any appreciable damage to the grazing or vegetation. Only in one locality were they at all numerous. On Beaver creek, in the southwestern portion of the Hills, near the plains, early in June grasshoppers were just hatching, and in a few weeks had grown large enough to strip the leaves from the bushes. Gnats and mosquitoes were sometimes found in the Hills, but never in numbers to cause any annoyance. Large flies were quite troublesome during a few weeks in July and

August, but the first cool nights caused them to disappear.

TIMBER.

The Black Hills are a well-wooded country. The plentiful rains and showers in summer keep the vegetation growing unchecked by drought. The density of the forests clothing the hill-sides have, from their somber hue, when viewed from a distance, given the name to this region, the "Black Hills," by which it is known also in the Indian dialects.

The following trees will yield timber in this section: —

The heavy pine (*Pinus ponderosa*), often known as yellow or Norway pine, the most abundant and valuable tree in the Hills.

Black and white spruce, found among the valleys in the central and northern portions of this region, covering a considerable area.

Burr oak (*Quercus macrocarpa*), in small groves on the eastern slope, near the foot-hills.

White elm (*Ulmus Americana*), associated with the burr-oak, occurs along the valleys of the streams near the eastern and southeastern foot-hills.

Aspen, white birch, ash, mulberry, box-elder (*negundo*), iron-wood (*horn-beam*), and juniper grow sparingly in different parts of the Hills, but are of little comparative value.

The pine forests cover so extensive an area and will yield so large a proportion of the timber that all the other trees combined may be neglected in comparison, though they will be found valuable in the future development of the country. The "Norway pine" is a tall, straight tree, free from limbs for one-half its height from the ground. The wood is white, soft, with a straight, somewhat coarse grain, free from knots, and splitting readily into "shakes," shingles, or other similar forms. The sap is more resinous than that of the white pine, and in this respect this variety approaches more nearly the pitch-pine of North Carolina, a tree which it somewhat resembles in its style of growth.

The transverse strength of the wood is not so great as that of white pine, but by proper care in using it in construction this deficiency can be compensated for and practically obviated.

On the bottom-lands in the lower valley of French creek, specimens of this pine were seen that were fully 100 feet in height, and would measure 35 to 40 inches through at the ground. Trees of these large dimensions are, however, rare in the Hills. Timber of from 12 to 24 inches diameter is common, while extensive tracts are covered by a dense forest of small slender pine from 50 to 60 feet high, and rarely less than 8 or more than 12 inches through at the ground.

The pine forests in the Black Hills, where the trees are of mature growth and uninjured by wind or fire, will furnish good straight saw logs from 30 to 50 feet in length and very uniform in thickness, with a gradual taper, averaging in diameter from 12 to 20 inches.

The tall slender pines will be very useful to the settlers in this region, being well adapted for fencing and house-building purposes. The resinous character of the wood makes it a most excellent fuel, burning with a long smoky flame, giving out an intense heat, almost equaling in this respect the pitch-pine of the Southern States.

On the tops of the ridges and hills, where the trees are exposed to the violence of the storms, the timber is wind-shaken and injured in quality; but in the more sheltered hill-sides, the broad level mesas, and in the numerous valleys and parks, the trees are free from this evil, and are remarkably straight and regular in growth. Pines were sometimes encountered blown down by the wind, across the narrow ravines, the trunk of the tree, even when 1 to 2 feet in diameter, being broken short off by the violence of the fall on the rocks. This rarely happens with the spruce under similar circumstances, owing to the greater transverse strength of the wood.

The Black Hills have been subjected in the past to extensive forest-fires, which have destroyed the timber over con-

siderable areas. Around Custer's Peak and along the limestone divide, in the central portion of the Hills, on the headwaters of the Box Elder and Rapid creeks, scarcely a living tree is to be seen for miles. The timber, deadened by the fire and the trees left standing, their decaying trunks stripped of bark by weather or prostrated by the wind, cover the ground, crossing each other at angles, forming an impassable abattis.

Some portions of the parks and valleys, now destitute of trees, show by the presence of charred and decaying stumps that they were once covered by forest, but generally the pine springs up again as soon as it is burnt off, though sometimes it is succeeded for a time by thickets of small aspens.

Along the eastern and northeastern slope of the Black Hills, at a distance of not more than ten miles from the edge of the plains, the pine is partly replaced by burr-oak and white elm of moderate size. These trees are found in groves in the valleys and swales between the hills, and associated with white birch in the ravines of the streams. Neither the oak nor elm attains a large size, the trees averaging 30 to 40 feet in height and 10 to 15 inches through.

The wood of the white elm is well known; that of the burr-oak resembles white oak, is strong and tough, and will prove valuable for many purposes.

In the elevated portion of the interior of the Hills, especially along the valleys in the limestone formation, extending from Custer's Peak to Floral Valley, and on the headwaters of Rapid, Castle, Elk, Bear Butte, and Spearfish creeks, two varieties of spruce, resembling the black and white spruce of the Northern States, are quite abundant. The trees are tall, growing thickly together, and will furnish logs quite uniform in diameter throughout their whole length. In the canyons where the soil is rich, the white spruce attains a height of 100 feet, and is occasionally 2 feet in diameter at the ground. Usually, however, these trees are from 8 to 15 inches through, and will prove

very valuable in constructing trestles and small bridges on account of the strength of the timber. The wood is white, fine-grained, and remarkably tough and elastic. The small slender spruce-trees are much sought after by the Indians, who visit the Hills in the spring for the purpose of procuring them for lodge-poles.

It is difficult to estimate accurately the area covered by valuable timber in the Black Hills. Taking into consideration that the foot-hills are but sparsely wooded; that there are extensive parks and valleys in the interior destitute of trees, or where there are only scattered groves of pine; that over an aggregate area of several hundred square miles the timber has been destroyed by fire, I estimate that *one-half* the surface included within the timber-line is covered by forest of more or less mature growth.

By careful measurements of the map, the area within the timberline, or outer boundary of the forest at the edge of the plains, is three thousand eight hundred square miles. One-half of this, or one thousand nine hundred square miles, is covered by woods, including the large forests of young trees, as well as the sections of valuable timber.

Portions of this area are difficult of access, or the timber is wind-shaken and injured in quality, and the forests of small pine are relatively more extensive than the tracts of timber of a mature growth. Hence I estimate that one-fifth the above area of the Black Hills, or nearly eight hundred square miles, equal to 500,000 acres, is covered by timber of merchantable quality, suitable for cutting and sawing into lumber.

Col. R. I. Dodge, commanding the escort, by an entirely independent series of observations, estimates the merchantable timber at only about four hundred square miles, and comparing it with the pine forests of North Carolina, he says: —

“ I estimate that there are in the two sections something over four thousand square miles of country more or less covered with pine. Of this, including the Red Valley, the

parks, the bare bottoms and valleys of creeks, I estimate that four-tenths are entirely without timber. Another four-tenths is composed of young forests, excellent for railroad-ties, small buildings, fencing, etc., but not yet fit for the sawmill. One-tenth is wind-shaken or injured by lightning or fire, and one-tenth is good lumber. In other words, I think that this four thousand square miles will furnish not more than one-tenth of the merchantable lumber that would be obtained from an equal area of the virgin pine forests of Michigan or North Carolina. There is an abundance of lumber for all purposes of the country itself, but, except ties, it will not furnish any very large quantity for exportation."



MINERAL RESOURCES OF THE BLACK HILLS.

BY FRANKLIN B. CARPENTER.

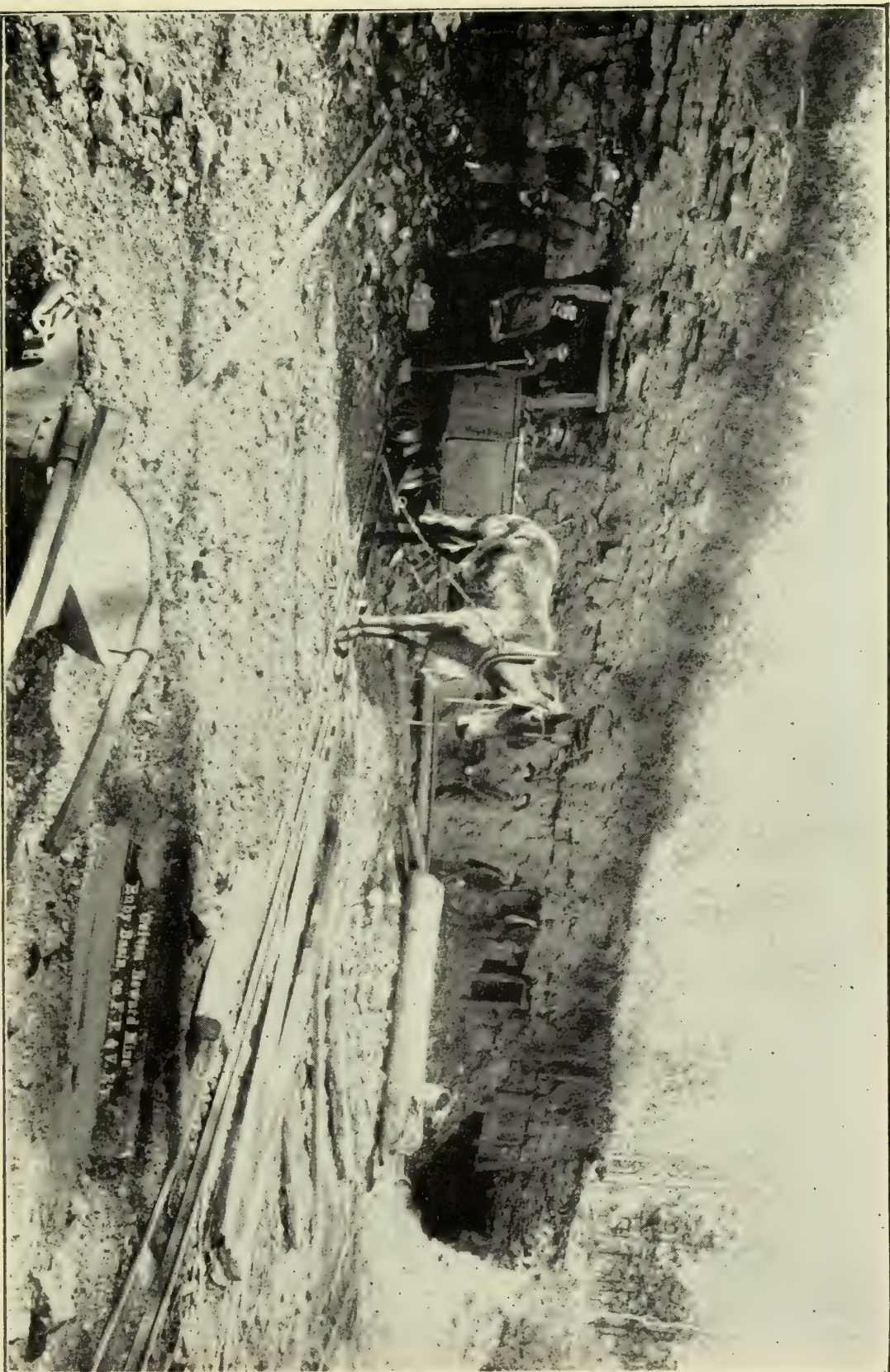
CHARACTER OF DEPOSITS.

The metalliferous deposits of the Hills are both extensive and varied. Iron, copper and tin abound, as well as gold and silver. Nor are other mineral resources wanting. Cement, fire clay and gypsum, as well as a great variety of building stones, exist in inexhaustible quantities.

The mines of the Black Hills are of such a character that prospectors cannot, alone, develop their claims into paying properties. They call, not only for the judicious investment of capital, but for correct technical knowledge as well, and are rather to be compared to the coal and iron industries of Pennsylvania or the copper industry of the Lake Superior region than to ordinary precious metal mining enterprises.

CLASSIFICATION OF DEPOSITS.

The metalliferous deposits of the Black Hills belong to many different classes, none of which, in my opinion, can be called true fissure veins. For some reason, as Williams has said, there seems to be an unaccountable glamour surrounding the expression, "True fissure vein," and a miner's first and most emphatic declaration about his claim is apt to be that it is a "true fissure," and he often seems to think that no higher compliment can be paid it. Now, while many true fissure veins have paid well, the actual advantage seems to be with deposits of a different type, of which may be instanced the Leadville silver mines, the Lake Superior copper mines or the Rammelsberg deposit in the Harz, which has been worked continuously for nearly a thousand years, having been discovered in A. D. 933. It



GOLDEN REWARD MINE, NEAR LEAD.

is a true ore-bed, being an independent member of the Goslar slate series, and as I am inclined to regard many of the more valuable deposits here as bedded deposits, I shall give a short description of this bed, and refer the reader to Wimmer's scientific monograph upon the subject. The Rammelsberg is a mountain, near the town of Goslar, in the Harz, consisting of the Goslar slate, Calceola slate and spirifer sandstone, which are of Devonian age, the spirifer sandstone being the oldest, but now, by reason of folding, forming the upper bed. The Rammelsberg ore deposit is found in the slate, and consists of irregular lenticular masses of ore, measuring upon the strike of the bed 3,930 feet, and showing ordinarily a thickness of 45 to 60 feet, which, however, sometimes widens out to nearly 100 feet. It has the same east-northeast strike as the slates, and the same dip, 45 degrees southeast, and shares in all the folds and contortions of the inclosing rocks. The ores yielded are various, but the originally prevailing characteristic mineral is believed to have been pyrite.

The great deposits of the Black Hills are of Archæan age, and yield mainly an auriferous pyrite, though, as in the Rammelsberg, lead, zinc and other ores occasionally occur. These deposits are sometimes lenticular in shape, and seemingly form independent members of the slate and schist series, and, like the Rammelsberg, share in all their folds and contortions, having a columnar cleavage like them, coincident with the bedding.

It is to be regretted that no accepted classification of metalliferous deposits has obtained in the United States. The somewhat antiquated work of B. von Cotta has been all-powerful among the members of the mining fraternity, and Mr. Prime's translation seems to have done duty in nearly every great mining lawsuit that has occurred in the West, hence his classification is more generally known than any other. The United States Geological Survey has given us several magnificent monographs upon the Comstock, Leadville and other deposits, but no one as yet seems to have attempted for any great mining section the work done

by A. von Groddeck for the Harz, and, while the extensive developments upon the fissure veins of Northern Colorado afford a field of study probably never surpassed, no one there interested seems to have improved the opportunity, though much time has been given by the United States Survey and School of Mines to more distant but probably less interesting fields.

The following is von Cotta's classification:—

- I. Ore-beds: Those deposits which lie parallel to the stratification of the inclosing rocks.
- II. Surface deposits.
- III. Veins.
 - a. True veins.
 - b. Bedded veins.
 - c. Contact veins.
 - d. Lenticular veins.

To which he added segregations, and impregnations or disseminations.

Phillips divides ore-deposits into the following classes:—

- I. SUPERFICIAL. a. Deposits formed by the mechanical action of water. b. Deposits resulting from chemical action.
- II. STRATIFIED. a. Deposits constituting the bulk of metalliferous beds formed by precipitation from aqueous solutions. b. Beds originally deposited from solution, but subsequently altered by metamorphism. c. Ores disseminated through sedimentary beds, in which they have been chemically deposited.
- III. UNSTRATIFIED. a. True veins. b. Segregated veins. c. Gash veins. d. Impregnations. e. Stockwerks. f. Fahlbands. g. Contact deposits. h. Chambers or pockets.

For the purpose of comparison, I append the following from von Groddeck's excellent work, *Die Lehre von den*

Lagerstätten der Erze, and regret that we have not an English translation. The work is an authority in Germany, and has been translated and largely used by the French.

Von Groddeck divides deposits into two general classes: *Primary Deposits* and *Secondary Deposits*. The first are those which are in the place where they were formed, the second are those which have been built from the ruins of the primary, such as placers, bog iron, etc.

The former he further divides into two general classes: *First*, such as were formed at the same time as the inclosing rocks.

- I. GESCHICHTETE LAGERSTÄTTEN. — BEDDED OR STRATIFIED DEPOSITS which include such as were formed at the time of the inclosing rocks and were deposited from water, which he further explains by calling them bottom-deposits. One characteristic is that they have the same strike and dip as the inclosing rocks.

These he again divides into three sub-classes:—

1. *Derbe Erzflötze* — *Compact Ore-Beds*, such as the carbonate and hematite iron ores.
2. *Ausscheidungsflötze*. — *Secreted or Segregated Ore-Beds*, as when stratified rocks, such as crystalline slates, sandstones, limestones locally contain ore disseminated in such a way as to lead to the supposition that both ore and rock were formed at the same time. Beds containing impregnations of sulphide ores, but impregnated at the time of formation. Von Grodeck objects to the term segregated for this division, but says the deposits would be classed as segregations if they passed above or below a given bed. The point seems strained.
3. *Erzlager*. — *Ore-Beds*, such while sharing in the dip and strike of the inclosing rocks, or more or less lense-shaped, as distinguished from the more sheet-like form of the first two.

II. **MASSIGE LAGERSTÆTTEN.** — **MASS-DEPOSITS.** Massive crystalline rocks, such as Diabase, Olivine, Syenite, etc., which carry ore, as magnetite, etc., in such a way as to show that both ore and rock have a simultaneous origin.

Second, those which were formed later than the enclosing rock, which he further divides as follows:—

III. **HOHLRAUMAUSFUELLUNGEN.**— Those which fill pre-existing cavities. These he divides into :

1. *Spaltenfuellungen* or *Gaenge*. — *Fissure Veins*.

a. Veins in massive rocks.

b. Veins in stratified rocks.

2. *Hæhlenfuellungen*.— *Cavity* or *Cave Deposits*, such as are found in limestone, etc.

IV. **METAMORPHISCHE LAGERSTÆTTEN.** — **METAMORPHIC DEPOSITS** such as those at Leadville or Galena (Black Hills), where the ores have been deposited by metasomatic interchange, or the cavities at least filled *parti passu* with their formation.

The three general classes of deposits recognized by Phillips, viz., Superficial, Stratified, and Unstratified, are all represented in the Hills, but not every subdivision of these classes.

PLACERS.

Two kinds of placers, viz., tin and gold, are found in the Black Hills. The placers are also of different ages, Quaternary and Recent, and that ancient consolidated placer found at the base of the Potsdam, for it seems impossible to call it anything else. The Quaternary placers yet yield some gold, but their richer parts, like Deadwood Gulch, are practically exhausted. Upon some streams, where the bed-rock is deep, requiring expensive pumps and other machinery, there may yet be found gold in quantity.

The formation of the Potsdam rocks has partly been caused thus: The ocean advanced upon the slowly sinking Archæan island, sorting over the material worn from the land, re-arranging and depositing it as sand and gravel, thus forming the basal members of these rocks. Containing particles of gold derived from the Archæan veins, it became in reality a gold placer, especially in the neighborhood of the great Archæan gold deposits, such as the Homestake. In time it was consolidated to rock, and to-day forms the "cement" beds of the miner. It is mined, stamped and amalgamated as other free-milling gold ore.

The former contact line of the Archæan and Potsdam rocks, as well as the subsequent erosion, is clearly shown. The porphyry capping of the vein was injected before the Potsdam and overlying rocks had suffered erosion. It flowed sometimes beneath the Potsdam and sometimes upon it and beneath the Carboniferous rocks.

Mr. Devereaux, who had the management of some of these "cement" mines, was enabled to make some interesting observations, one of which was that the gold in these conglomerates is finer than the gold of the Homestake, whence it was derived. Since it was set free, it has been subjected to various chemical agencies, which have dissolved out a part of its silver alloy. This solution of silver, having been confined to the surface of the pieces of placer gold, has given them a corrugated appearance, and this being true, it follows that the smaller the pieces are, the finer gold. The average of Mr. Devereaux's assays gives the following fineness:—

Gold .....	.904
Silver .....	.096

The different mines upon the Homestake, according to Mr. George Hewitt, yield gold as follows: —

	Homestake.	Highland.	Terra.	Deadwood.	De Smet.
Gold.....	.820	.830	.825	.850	.820
Silver.....	.170	.155	.160	.140	.170

He also observed that in the vicinity of the dikes which cut the Potsdam, but little gold was found; and such as there was, had lost its rounded appearance and gave every evidence of having been subjected to a powerful solvent. As this fact bears upon the formation of other gold deposits found in these rocks, I call special attention to the fact.

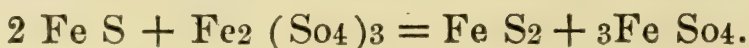
BEDDED DEPOSITS.

The Homestake and Like Deposits.

These are by far the most extensive and important of the mineral deposits of the Black Hills. The best known group of mines occupies a small section 6,000 feet long by 2,000 feet broad, known as the "Belt," and which last year produced \$2,271,341.14.

That these deposits were originally laid down as beds, I have no doubt; but it is also certain that they were subsequently much altered. My view of their formation is as follows: —

At the time when the inclosing rocks were laid down, large quantities of proto-sulphide of iron were formed through the agency of decaying organic matter, whose presence at that time is attested by the large quantities of carbonaceous matter yet present in these beds. This proto-sulphide of iron was not, at least, not to any great extent, gold-bearing. Subsequently, by the action of ferric salts, in solution, this proto-sulphide was changed to bi-sulphide, and the iron solutions which wrought this change also brought the gold which is now found in these deposits. I have adopted these views for the following reasons: The presence of such quantities of graphite is considered proof of former organic matter. These beds of pyrite often pass into pyrrhotite, which may be classed as a proto-sulphide of iron, and in so doing they always cease to be gold-bearing. I suppose the pyrrhotite to be nearer the original conditions of the sulphide, and the change that has taken place may be represented by the following chemical equation: —



The part of the "Belt" belonging to the Homestake combination is gold-bearing for a distance of 6,000 feet. The "ore" is not continuous throughout this distance, but occurs in shoots or vast "pipes," lenticular shaped in cross-section. The beds of argillites, phyllites and amphibole schists, in which these shoots occur, has a strike of north $37\frac{3}{4}^{\circ}$ west, which is also accurately the strike of the plane or "ore channel" in which the shoots occur. The dip of the beds, as a whole, is to the east. The shoots dip east also, upon, but athwart this plane, at an angle of about 45 degrees. The ore and inclosing rocks have indifferently the same general cleavage structure.

In the Homestake proper, or south end of the Belt, there are numerous sheets of porphyry, or more properly, of felsite, sometimes cutting across the stratification, but usually parallel to it. In the northern half — that is, the Deadwood-Terra and DeSmet end — no porphyry is found in the vein, but the section was once overlain by a felsite which yet remains as a capping to the ridge between Gold Run and Bobtail Gulch, and between Bobtail Gulch and Deadwood Creek. This porphyry was injected between the slates and the Potsdam, raising the latter and other overlying rocks after the manner of a laccolite, though they have since, in the immediate area, been removed. The vent through which this sheet was injected had probably no connection with the small dikes found in the Homestake, but was intruded from the southwest, and most likely was connected with the igneous mass forming Terry's Peak.

The percentage of pyrite impregnating the slates and schists and forming the "ore" is never large. The yield upon concentration is seldom 20 per cent. The average is probably not more than 7 per cent. There are no solid bodies of pyrite.

The influence of the porphyry upon the lode seems to be good, but whether it produced an enrichment of the bed, or simply rendered it, by some action, oxidizing or otherwise, more free-milling, I did not determine definitely.

The fact, however, is, that the Homestake yield per ton is much greater than that returned by the Deadwood-Terra and other claims where the igneous intrusions do not occur—the former, from the best attainable data, being \$3.87 per ton, while the latter lies between \$2.03 and \$2.82. The sheets of igneous rock in the Homestake are porous and much decomposed. Careful assays showed no gold. The sheets east of these, near the pump shaft, are pyritiferous and assay from \$1 to \$2 per ton. From what I have stated, I am led to the conclusion that the porphyry has had a twofold benefit:—

First. It has rendered the ore more free milling.

Second. It has in its neighborhood produced either an enrichment of the deposit or a further concentration of what gold originally existed in it.

That it was gold-bearing before the injection of these dikes is proven from the fact that remote from their influence it is gold-bearing, and that all similar beds through other parts of the Hills where no igneous rocks occur, are also gold-bearing; as well as from the evidence furnished on preceding pages from study of the Potsdam conglomerate, which, as has been stated, was laid down prior to their injection. At the surface the ore has always appeared in shoots, as I have described, but I am credibly informed that in the deep workings of the Homestake end this is no longer the case, the bed being now continuously ore-bearing for many hundreds of feet. These ore-bodies are said sometimes to have exceeded 300 feet in thickness. Careful measurements of the big open cut upon the Golden Star claim gave as the cross-section of that body 150x350 feet, while the Terra cut gave 150x250 feet. These figures are probably correct so far as the width is concerned, but the shoots may be longer.

I have compared this deposit to the Rammelsberg, but from the descriptions of von Cotta, von Groddeck and Wimmer many discrepancies exist, not only in that the inclosing rocks of the Homestake are Archæan, while the Rammelsberg deposit is found in the Devonian,

but in the shape of the ore-bodies and character of the accompanying minerals. The deposit is also longer and thicker than the Rammelsberg. Beginning with the northern end, it gradually widens until the segregated Old Abe and Homestake are reached, where it has a width of 350 feet by actual measurement. Other ore-bodies are found in the same beds, but occupying different planes. From the shaft upon the Golden Terra extension, the Caledonia discovery shaft lies to the east, a distance of 1,300 feet, measured at right angles to the course of the Homestake. Other ore-bodies also occur, but want of time prevented my giving them any special study. The Caledonia ore-body is a pyritiferous chloritic schist lying between a hanging wall of phyllite and a foot-wall of mica schist, in which there occur layers of chloritic schist which also carry gold as the main body does. The tunnel intersects before reaching the vein, several small dikes of felsite, whose course is the same as the strike of the ore-deposit. Two ore-bodies are worked by the company, one showing a thickness of about 40 feet and the other a thickness of 180 feet.

If we deal with the "Belt" as a whole, I regard it as a particular zone of slates and schists, in which there are many lenses and shoots of ore. These shoots are never solid bodies of pyrite, as in the Rammelsberg, but zones which are impregnated with pyrite. The whole thickness of the beds in which these ore-bodies occur is about 2,000 feet, and they can be traced, I believe, throughout the entire length of the Archæan rocks in the Hills, and are gold-bearing in many other places south of the "Belt." Upon the east and the west sides of it the slates and schists forming the "Belt" pass into quartzites, which may be regarded as the hanging and foot-walls proper of the deposit. A line drawn upon a given level through the ore-channel or shoots constituting the Homestake, Deadwood-Terra and De Smet ore-bodies is absolutely straight, showing that though these shoots vary in size, they all lie in the same plane.

Summary.

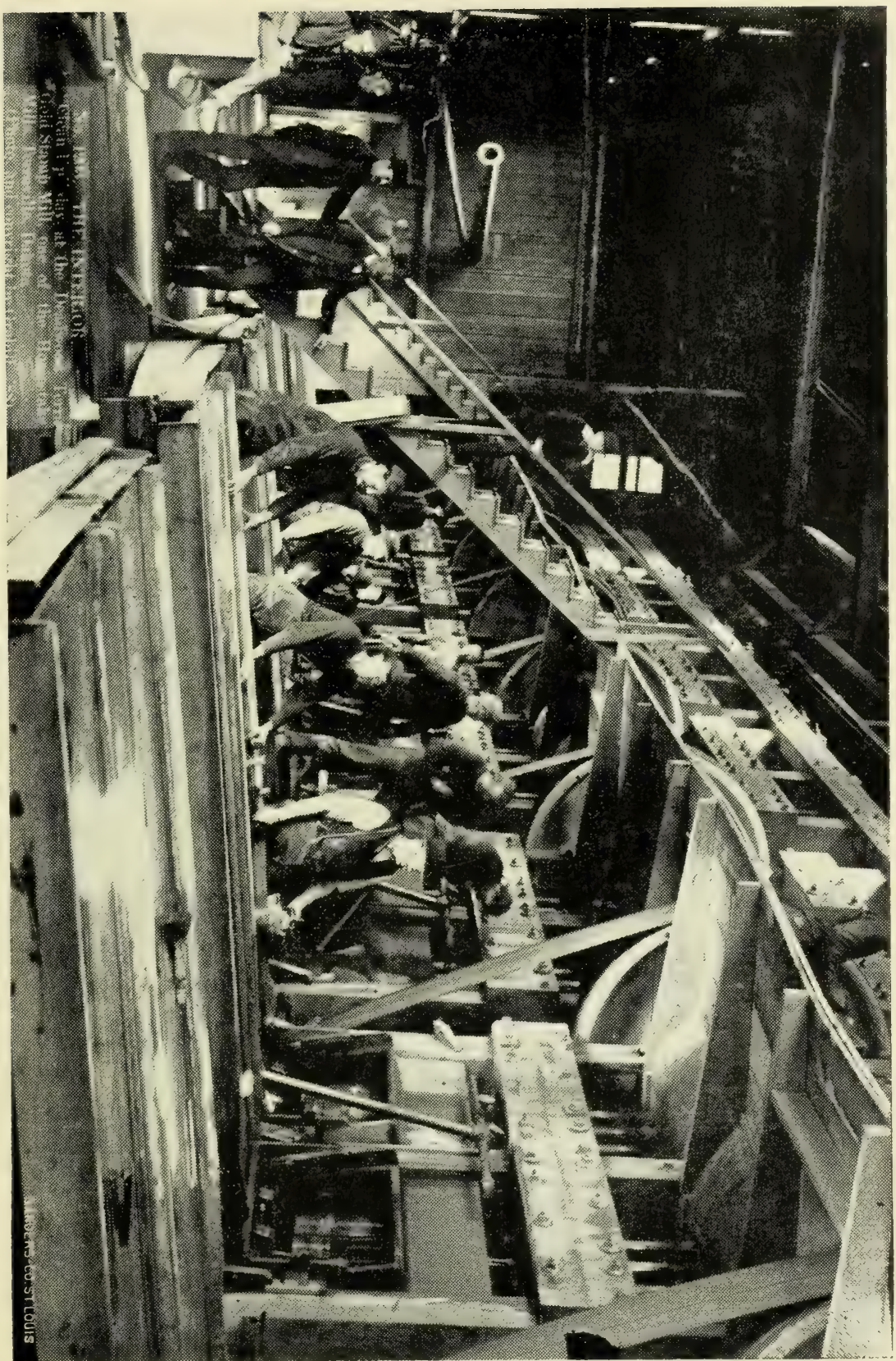
The Homestake was originally laid down as a stratified or bedded deposit at the time the Archæan rocks were laid down. It appears to have been subsequently modified by infiltration, but these changes also occurred in Archæan time, for at the formation of the Potsdam, it was fully mineralized and gold-bearing, as I have shown under the head of Placers. It appears to have been either enriched or the gold concentrated in a more available form by the porphyry intrusion, which are of Tertiary age. This is shown by the fact that the yield of gold, both by mill test and assay, is greater in the vicinity of these bodies than remote from them. The beds in which the gold occurs can be traced throughout the Hills, and are gold-bearing in many places south of the Belt proper.

MINING UPON THE BELT.

Different methods of mining are pursued upon the Belt. The surface ores are worked by large open cuts, and at a minimum cost, but as the depth which can be reached by this method, even where the deposit is from 150 to 200 feet wide, is limited, extensive underground workings exist upon all the mines except the De Smet. In the Homestake mines the ground, as fast as broken, is securely timbered by the Nevada "square set" and filled solidly with waste rock. At the Caledonia no timber is used, the ground being safely supported by solid pillars and worked in a way which is a little different from that ordinarily pursued where no timber is used.

Cost of Mining at the Homestake.

For the year beginning June 1st, 1887, and ending June 1st, 1888, the cost of mining at the Homestake, including the "mine" and different shafts, as figured from the annual report, was as follows:—



"CLEAN UP" AT THE HOMESTAKE MILLS.

Items.	Amount Expended.	Cost per Ton.
Labor.....	\$265,266 51	\$1.0900
Dead work.....	55,267 50	0.2271
Supplies	13,413 08	0.0551
Powder.....	2,685 05	0.0110
Candles	4,123 75	0.0169
Machinery	10,641 67	0.0437
Oil.....	3,098 90	0.0127
Timber.....	42,010 09	0.1726
Wood	12,267 00	0.0504
Coal.....	997 80	0.0041
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Cost of mining.....	\$409,771 35	\$1.6836
Cost of milling.....	202,951 27	0.8349
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Total cost of mining and milling.....	\$612,722 62	\$2.5185

Leaving out the dead work and the work done at the various shafts, and including only the disbursements at the mine for labor, supplies, etc., there was expended \$336,596.31, which gives cost per ton of ore mined, \$1.38.

There were mined 243,355 tons of ore, which yielded:—

In gold.....	\$3.68
In silver.....	0.03
<hr/>	
Total.....	\$3.71

Net profit per ton, including all expenditures, \$1.19.

The cost of mining at the Highland and Deadwood Terra, judging from the average yield of the ore, must have been very much less than this. The difference is probably to be accounted for by their greater amount of open-cut work.

Other Deposits.

Aside from the Homestake, other deposits of this class have been but little worked. Numerous beds of similar pyritiferous gold-bearing schists exist throughout the Hills, which, so far as surface indications go, cannot be told from parts of the Homestake belt. In the early days of the set-

tlement of this section, numerous small stamp mills were built, but from various causes they failed to pay. If the Homestake was worked in a small way it, also, would not pay. It is the enormous scale upon which these mines are worked, thus reducing everything to a minimum cost, that enables them to run at a profit. This may seem like a contradiction, but no small mills, even in this section, were ever able to make a profit.

That deposits carrying free gold to nearly or quite the same extent as some of the Belt mines exist in other parts of the Hills, is well known. Many samples, not "specimens," were taken during the progress of this work, which, at the School of Mines, returned by free-milling tests from \$2.00 to \$12.00 per ton, this last amount having been returned from claims in both Custer and Pennington counties. As free-milling ores can be tested by any miner with a common mortar and pan, we did not devote the same time to their examination as to those ores which require more technical knowledge for their treatment. These last deposits, save in the gossan or outcrop, show little or no free gold. Beyond this, they do not differ from the deposits already described, and, like them, carry ores in immense quantities. If they can be successfully treated, the gold output of the Hills will be materially increased.

I spent much time in their study. If the gold was in the sulphuret, I saw no reason why it might not be concentrated to a valuable product. If these bodies were solid pyrite, of course no concentration could be made. If occurring in small veins, the cost of mining would be too great, for their value seldom reaches \$6.00 per ton. It seemed that a hint might be taken from the large mines of the Lake Superior region, where, owing to the great quantity in which low grade copper ores occur, as well as to the ease with which they can be concentrated, enormous dividends have been paid from ores worth far less, as they are broken from the mine, than those of which I speak. The Atlantic copper mine of that section made in 1885, 1886 and 1887, the following extraordinary showing: —

The rock yielded only 0.743 per cent of refined copper, and was treated at the following cost per ton : —

	1885. Cents.	1886. Cents.	1887. Cents.
Mining, selecting, breaking and all surface expenses..	78.62	80.88	87.23
Transportation to mill.....	4.80	3.48	3.80
Stamping and separating....	30.36	26.53	27.31
Freight, smelting, marketing and New York expenses..	25.45	24.25	23.07
	<hr/>	<hr/>	<hr/>
Total working expenses	139.23	135.14	141.41
Total expenditures....	143.60	138.01	145.22
	<hr/>	<hr/>	<hr/>
Net profit.....	22.05	15.29	30.53

Of the vast quantity of these pyrite ores there was no doubt, for the beds seldom showed less than 50 feet in thickness and could be traced for thousands of feet. They could be mined and concentrated probably, as cheap as at the Atlantic. Could rock yielding less than \$5.00 in gold, not free-milling, be made to pay? I knew of no such case; but, upon the other hand, there were the copper deposits paying fine dividends upon ore of far less value. I began the study of the question. The results obtained were not always satisfactory, and while we have in the metallurgical laboratory ample machinery, I could not, for reasons stated, treat any of the lots upon a working scale; but I found some deposits which will not only repay a judicious investment of capital, but give employment to many hundreds of men. Not wishing to appear to be advertising anyone's claim, I give only results :—

No. 1. This claim is one of a large group located in Pennington county. The deposit is more than 100 feet wide, and can be clearly traced for 4,500 feet. The ore appears to be a hornblendic schist, which in places succeeds to a mica schist, and this often to a schist—character not determined—but highly plumbaginous. These are impregnated with ordinary pyrite and arsenopyrite.

The creek, for some distance below the crossing of the

bed, has been extensively worked for placer gold, which I believe to have been derived from this deposit. Many tests were made from different parts of the ore-bed, with good results. The following is one from the main workings: —

Average value of rock, \$6.19. This was concentrated and yielded 22.15 per cent; concentrates worth per ton \$22.73.

Amount saved by chlorination, \$20.46; that is, 4.51 tons of rock yielded one ton of concentrates, returning \$20.46.

Cost of mining, transportation to mill, taxes, etc., for 4.51 tons of rock at 78.62 cents per ton (same as at “Atlantic” copper mines), \$3.545.

Cost of concentration for 4.51 tons at 30.36 cents per ton of rock, \$1.369.

Cost of chlorination per ton of concentrates, \$7.00.

Incidentals, exchange, etc., \$1.00.

Total cost per ton of concentrates, \$12.914.

Total profit on one ton of concentrates, \$7.546; or, total profit on one ton of rock, \$1.67, or nearly eight times the profit per ton of rock made at the “Atlantic” in 1885, or eleven times the profit of 1886.

No. 2. Deposit, mica schist, with pyrite. Zone, 50 feet wide, adjoining a granitic tin vein. Rock yielded 25 per cent concentrates worth \$43.40 per ton.

The experiments made upon Custer County gold ores were frequently very satisfactory.

No. 1. Ore, mica schist, with pyrite; value of rock per ton, \$24.84; per cent of concentrates, 9.41; value per ton of concentrates, \$142.56. This was exceptionally rich.

A second sample from another similar deposit gave:—

Value of ore, \$12.00, which gave concentrates worth per ton \$67.

No. 3. Yielded 25 per cent of concentrates, worth per ton \$42.

No. 4. Black micaceous schist, with arsenopyrite. Zone 150 feet wide; value of sample per ton, \$3.10; per cent of concentrates, 9.40; value of concentrates, \$17.56.

This should have been, with good concentration, very much greater. I am unable to account for the loss; but, notwithstanding this, the size of the deposit, the facility for working, etc., would yet leave a profit. The Belt probably extends through the county, if not the Hills, and is believed to be a continuation of the zone from which the first Pennington County sample above was taken.

Professor Hofman has figured at length the value, after the free gold has been extracted, of the concentrates at the Homestake. The value of the Caledonia concentrates, which are now being saved, are even greater.

The following well-known, but now unworked mine, was investigated with the following result: Large quantities of ore are exposed in this mine, which has been worked intermittently as a free-gold property, for the past seven or eight years. After the free gold was extracted, I found the ore yielded 10 per cent of concentrates, which averaged \$17.00 in gold per ton. The free gold saved has paid for all development and running expenses. The amount received from the concentrates, after deducting the cost of chlorination, should be clear profit. From a careful survey and examination, I estimated that the opening of another level would add \$300,000 to the amount of ore in sight, one-third of which should be clear profit.

It is the intention of the School of Mines management to devote the coming season to the further survey and study of the deposits of this class. I am satisfied, from the work of the past seasons, that these ores will pay to work in the manner indicated, viz., by concentration and chlorination, and upon a scale at present little imagined. The enormous quantities in which they are found may entitle them to rank with the great mines of the country, such as the Lake copper mines or the Homestake enterprises.

Segregated Quartz Veins.

Besides those already described, there are numerous gold-bearing quartz veins parallel to the bedding, which

may be called segregated veins. The gold is accompanied by little or no sulphurets, but occurs free in a vitreous quartz, often in quite large pieces. Four men without capital have with a small 5-stamp mill operated a vein of this sort during the past year, with excellent results. They estimate that the four worked 89 days each, equal to 356 days' labor; this, at \$3.00 per day, \$1,068. They have had eight "clean-ups," which netted them \$3,383, leaving a handsome profit of \$2,315. Average samples of their ore assayed at the School of Mines \$2.75.

I have mentioned only a few of the more prominent gold mines of the Hills, for it is not the object of this paper to mention particular mining enterprises further than is necessary to show the character of the Black Hills deposits. The thorough study of any one large deposit would easily consume a whole season's work. For this reason, no mention has been made of the Lookout, Uncle Sam, Gregg mines or many others that would seem to require especial mention. There is room yet for the investment of much capital in gold milling enterprises, in both the free-milling and refractory classes of ores here described.

COPPER.

The copper deposits are numerous and extensive, but undeveloped. They are found in both the eastern and western series of Archæan rocks — the richer apparently being in the latter. They show a copper-stained gossan from 50 to 500 feet in width. This is a surface accumulation of copper leached from below and deposited near the surface. Where the outcrops or backs of these ore-beds disappear beneath the Potsdam, it, also, is often copper-bearing, clearly deriving this metal as a secondary deposition from the beds below.

At the Blue Lead there is a great quantity of these gossan ores. In sinking through them the miners reach a leached decomposed portion of the bed, but no one has yet gone far enough to tell what lies below this. Doubtless

they are identical with the famous Ducktown deposit, and after passing the decomposed part, a local enrichment will be found resting upon the unaltered portion of the deposit. Beneath this, the ores will consist of pyrite or pyrrhotite, in which there will be mixed a percentage of copper pyrite. The value of these deposits will be directly proportioned to this percentage of chalcopyrite. They will also be found to be distinctly nickeliferous. These points I have determined by tracing the veins down to the creek beds, where they are less decomposed. They will also be found to carry gold, for several of the creeks below them have yielded fairly well in gulch gold.

There is enough of this surface copper, which consists of malachite, red oxide, native copper and copper glance to justify the erection of a water jacket smelter at some convenient point. The average per cent of these ores, as assayed at the School of Mines, is about 35 per cent copper equal to 700 pounds of metallic copper per ton, worth at present rates \$112. This ore would also pay to ship. I know from personal examination that many thousand tons of these surface ores can be had, and miners now out of employment, by working and carefully sorting these ores can make far more than wages from them. They can be sorted to yield \$150 per ton. In their unaltered parts they show all the peculiarities of the Homestake vein, as regard size, carbonaceous matter, structure, cleavage, etc. I regard them as ore-beds — Typus Ducktown — if I may be allowed to quote from von Groddeck.

Ultimately they will be valuable, and will be sought after. At present the surface ore can be profitably worked. In these gossans the oxide ores are clearly derived from native copper. This was derived from the sulphide ores beneath and deposited at the surface as native copper. In breaking a piece of the ore there is often found a nucleus of native copper, surrounded by red oxide, showing that the latter was derived from the former. When the ores are wholly red oxide, I judge this to have been the fact also.

There is a copper deposit of a different class upon Box

Elder Creek. Its value also is undetermined. It consists of a belt of lime and magnesian rocks whose existence was unknown to me at the time the article upon the geology of the Hills, in the preceding part of this pamphlet, was written. The existence of such rocks was indeed there predicted from certain characteristics shown by the Potsdam, but they were not known to be exposed within the limits of the Hills. No beds of pure crystalline limestone are shown even now, but large quantities of calcite exist. Scattered through this belt in the most irregular manner are various minerals — galena, copper pyrite, ilmenite, graphite and pyrite. Copper pyrite is the most common mineral, with galena probably the second in prominence. My attention was called to the deposit by Mr. Samuel Scott, an experienced miner of this section. It carries gold in appreciable quantities. The belt of lime and magnesian rocks in which the minerals occur is said to be 800 to 1,000 feet wide. Its economic value needs further study. Its value, if any, will probably be found in the gold. It occurs in close connection with the dike of diorite already mentioned.

NICKEL.

This occurs in the bedded deposits of pyrrhotite above mentioned. It is always associated with copper. The claims most studied are upon Spring creek. I think I may safely state that there is no body of magnetic pyrite in the Hills which does not carry nickel. The average of our assays is $1\frac{1}{2}$ per cent nickel, though samples carrying 8 per cent have been found.

The production of nickel in the United States is decreasing. From 1885 to 1886 this decrease amounted to nearly 28 per cent. The consumption did not decrease, but was made up from importations from abroad.

CONTACT DEPOSITS.

General Description and Extent.

These include the deposits found in the Palæozoic rocks in Ruby Basin and Bald Mountain, at Galena and Carbonate. The former are mainly gold-bearing, while the latter yield silver and lead. They cover a large area — larger, as I shall presently indicate, than is generally supposed — and must soon become important ore-producers. The ore-bodies are not continuous, but occur in shoots. In the first-mentioned districts the shoots have great linear extent, and are usually from 40 to 60 feet wide, and while some are less than this, others again are greater. They vary in thickness from a few inches to ten feet or more. Many hundreds of claims showing mineral have been staked and recorded. The value of the ore varies. Some of the ore-bodies will not average over \$15, while others exceed \$60 per ton. From \$20 to \$25 may be taken as a fair mean. Some idea of the value of a claim covering but a single shoot for its full length may be had from the following calculation:—

Supposing the width to be 40 feet thickness but 2 feet and length 1,500 feet, a shoot should yield about 10,000 tons, which, at the average value of \$25, will yield \$250,000 worth of ore. As ore may be found at different levels or “contacts” in the same claim, and more than one shoot exist at the same level, this calculation is not intended to show the absolute amount of ore that may be in any one claim. These ore-bodies are not found continuous, but should a full claim 1,500 by 300 feet be underlain by a single sheet of ore but 2 feet in thickness it would yield nearly \$2,000,000.

These mines are about nine miles from the city of Deadwood, at which place a leaching plant for the treatment of these ores is now in process of erection.

At Galena the ore-bodies are of equal promise, but of a different character, being silver-lead instead of gold. Two

smelters have been erected in the camp and employed from time to time upon these ores, but distance from coke and other supplies has heretofore rendered the smelting expensive; but the near approach of the railroad is believed to have so reduced the cost that the camp will in the future be a steady producer of lead and silver. The value of both of these sections is assured. Inability to publish a map prevents me from showing their extent as I would like; and while I spent much time in determining it, I must at this time content myself with a preliminary notice of the occurrence of these ores, showing their probable origin and extent. It may be of interest to prospectors and others.

These ores are found only in connection with the igneous intrusions. The gold ores are found in the vicinity of Terry's Peak and Bald Mountain, where outliers of the Potsdam rocks yet remain. The inference is fair that the rocks once connecting these outliers were also mineral-bearing, and that in the Potsdam beneath the yet unre-moved Carboniferous beds will be found ores also — at least so far as the igneous intrusions continue. Owing to the durable nature of the upper parts of the Carboniferous limestone, forming, as it does, nearly vertical walls, the underlying Potsdam at its base is usually concealed by a talus, making it difficult to prospect; but by many trips down the almost unexplored canyons south of Spearfish, and east and north of Galena, I was enabled to draw a reasonably sure conclusion that the ore-breaking rocks of these sections have a far greater extent than has yet been suspected.

At Galena, the miner sees only the outcrop of these ores. They dip eastward with the inclosing rocks at an angle of about 16° from the horizon. After leaving Bear Butte creek, no other streams cut through to the level of the mineralized portions. The questions then occur, How far will these rocks prove ore-bearing? Would a shaft sunk upon the territory lying between the village of Galena and the plains beyond prove it to be ore-bearing?

North and south of Bear Butte Creek, there is an area

of nearly fifty square miles where the igneous rocks occur in exactly the same relation to the Potsdam as at Galena. The streams of this area sometimes cut through to the igneous sheets between the Potsdam rocks, enabling one to see this relation, while vertical dikes rise in many places to the surface. I believe that shafts, sunk to the Potsdam anywhere in this section, would be likely to intercept ore. West of Terry's Peak and Bald Mountain, the same condition occurs throughout a much larger area, extending to the Wyoming side of the Hills, where similar ores are known to exist. In this area a number of streams cut through to Archæan. Upon a few of these I found ores similar to those of Bald Mountain and Ruby Basin. Almost any of the small streams, like Cold creek, that flow into Spearfish creek from the east, will show evidence of these deposits, and should be prospected more thoroughly. After a thorough examination, I am convinced that not a tenth of the area in which these ores occur has yet been located.

This section as well as that east of Bear Butte, is overlain by the Carboniferous limestone. Where the dikes above referred to cut through this limestone, contact-deposits of a different character occur. They approximate, more or less, a vertical position, and the Iron Hill mine may be taken as a type. The ore-bodies, which consist of galena and carbonate of lead, the carbonate being clearly derived from galena, are found adjoining the porphyry where it cuts through the limestone. They differ from the ore-bodies at Galena in that they are larger, and cut across the bedding, while the former are parallel to it; but they are none the less contact deposits.

At Iron Hill, the Potsdam rocks can be seen forming the bed of Cold creek, and between them and the Carboniferous limestone, in which the Iron Hill ore-deposit occurs, is an immense horizontal sheet of porphyry, differing in no way in appearance from the vertical dike in the Iron Hill mine. Beneath this sheet, however, the Potsdam rocks are gold-bearing, while the deposits in the immediate overlying limestone are silver and lead-bearing. It would seem as

though the same sheet had caused in one series of rocks accumulations of gold ore, and in the other accumulations of silver ore. I mention this fact for the bearing it may have upon the manner in which these ore deposits are formed. I shall make a further use of it presently.

Dikes, such as the one connected with the Iron Hill deposits, are common in the area east of Galena, and like it, cut through the Carboniferous limestone. Adjoining these dikes, is frequently the "liver-colored rock" which formed the gossan or outcrop of the Iron Hill mine. Samples of rock from these gossans collected by me assayed from three to ten ounces in silver. I hazard the prediction that ore-bodies similar to the Iron Hill, will yet be found there, as well as the continuation of the Galena deposits in the Potsdam beneath, of which I have already spoken.

Before the overlying rocks had been removed, we may imagine that the Galena and Bald Mountain sections presented the same appearance as these adjoining areas to-day; and had the prospector then been there, he would have seen as little of what lay beneath as he can now see in the area under consideration. Since then, however, the streams have cut through to the Archæan rocks at Galena, laying bare, in their course, the outcrop of the lower Potsdam rocks, enabling us to study the occurrence of ore, from which we should be able to conclude how far the ore-bearing rocks are likely to extend. I venture the opinion that they are co-extensive with the intruded igneous rocks. The matter could probably be settled by borings, without the expense of a shaft. In future report, I trust to make my meaning plainer by suitable maps and drawings, which will also define the extent of the area in question.

The Ore-bodies of the Potsdam.

These occur principally along the bedding planes of these rocks, but deposits are also found occupying the vertical joint planes, as well as impregnating the quartzite by replacing the cementing material of the original sandstone. They are found in such close relation with the igneous

rocks that the conclusion is irresistible that they owe their origin to these rocks.

At Ruby Basin and Bald Mountain they usually occur as impregnating distinct zones of the quartzite, and occur at different levels in the rock. The most favorable position seems to be upon, or in, the upper parts of the quartzite forming the basal member of the group. Owing to the removal of the overlying rocks, many of the ore-bodies are so thickly covered that the original pyrite has been oxidized. That this oxide, now forming from 10 to 20 per cent of the ore-body, was derived from pyrite, there seems to be no doubt. In the deeper workings, a peculiar bluish quartzite constitutes the ore. Under the microscope this is seen to be composed of rounded grains of silica, imbedded in a siliceous paste, which carries a very finely divided iron pyrite. This siliceous paste with the pyrite clearly occupies the spaces between the grains of quartz which composed the original sandstone, and was deposited metasomatically, replacing the former calcareous cement. That is, particle by particle, as the original cement was dissolved out, it was replaced by the silica-pyrite cement. The solutions which wrought this change brought also the gold and silver. From the description I have given, it will be seen that these deposits do not, in the ordinary sense, fill pre-existing cavities.

These ores are, in some sections, almost exclusively gold-bearing; in others, partly gold and partly silver, and again in other places the silver predominates. They fill not only the spaces between the grains of quartz, but occur in large bodies, replacing the beds of lime shales sometimes occurring in the Potsdam. This last is the mode in which the deposits at Galena occur. It would seem as though the porphyry at Bald Mountain brought mainly gold; at Ruby Basin, a few miles distant, gold and silver in nearly equal quantities, while at Galena, twelve miles distant, silver-lead predominates. In the same section the proportion of gold is greater in the lower contact, while in the upper it gives place to silver. That is, broadly speaking, gold pre-

dominates in the quartzite, but gives place to silver as we approach the more calcareous portions forming the upper parts of the Potsdam, while in the massive limestone such ore-bodies as are found, like the Iron Hill, are exclusively lead and silver, notwithstanding the porphyry is in all instances the same.

Much good work upon the ore-deposits of the western territories has been done by the members of the United States Geological Survey. Becker upon the Comstock seems to have satisfactorily traced the gold and silver contents of that famous deposit to the diabase forming the east wall of the lode where it existed sparsely disseminated, which percolating waters dissolved out and redeposited in the fissure forming the lode. * * *

TIN IN THE BLACK HILLS.

Discovery.

The existence of tin in the Black Hills has been known from the year 1877, when it was recognized by Professor Richard Pearce, the well-known metallurgist of the Boston and Colorado Smelting Works at Argo, near Denver. He determined the black sand in some gulch-gold sent him from the Black Hills to be cassiterite, and while announcement was made at the time, it attracted little or no attention. The practical discovery dates only from the year 1883, and the credit undoubtedly belongs to Major A. J. Simmons, of this place, who proved the matter at his own expense. Some samples of the ore were sent to General Gashwiler, of San Francisco, who employed Professor W. P. Blake to investigate the find.

A short preliminary notice was made of the discovery and associated minerals in the *American Journal of Science* for September, 1883, by Mr. Blake, who published a more extended notice in the columns of the *Engineering and Mining Journal* during the same month.

The area of tin-bearing rocks has constantly been extended, and is now known to entirely surround Harney's Peak, and

to extend into the smaller granite areas lying to the west and south of Custer City, as well as entirely throughout the small Archæan area west of Deadwood known as the Nigger Hill District.

The Nigger Hill section differs from the Harney Peak region, inasmuch as it contains both the igneous rocks of the Tertiary age and the granitic rocks common to the Harney Peak region. The tin veins are gold-bearing, the gold probably being carried in the pyrite which sometimes accompanies the cassiterite. The section has been worked continuously for placer gold since its discovery in 1875. The miners have always been troubled with a black sand which filled the riffles of their sluice-boxes to such an extent as to be a positive nuisance. It was commonly called "iron," and notwithstanding the note of Professor Pearce, its true nature seems to have been unsuspected by the miners until after the discovery of tin at the Etta mine. It was then found that the troublesome black sand was tin ore of a good quality. Mr. S. F. Molitor, the well-known assayer of Deadwood, and Mr. Mark Hydliff, of Bear Gulch, both early called attention to this locality. The tin-bearing rocks are partly in Dakota and partly in Wyoming. The whole section is easily reached from Spearfish.

From the manner in which the Potsdam rocks were laid down there is every reason to suspect that they are, in this area, gold-bearing. Not only this, but since these tin veins are of Archæan age, the conglomerate forming the base of the Potsdam should show tin also. This did not occur to me at the time of my visit, and I have had no chance to prove this view since. As the present streams have hardly begun to cut into the Archæan rocks of this section, the placer gold and the vast quantities of stream tin found here can hardly have been freed from the veins by the action of the streams since the Cambrian beds were removed. It is not unlikely that both the gold and the stream tin, in part at least, were derived from the Potsdam rocks, which of course receive both from the great Archæan veins; but received them

during the erosion of the slates that took place in Cambrian time.

But little gulch mining has been done in the Harney Peak region, and perhaps for this reason stream tin has not been found to the same extent as in other sections. Mr. Jeff McDermot was doing the only placer mining in the district that was noted by the writer. He finds quantities of stream tin in his sluices, a bag of which was taken to the School of Mines, and there run into bars. From the great number of veins, the deep channels which have never been mined would doubtless show quantities of it.

It will be seen that the tin area of the Hills is naturally divided into two localities — the Nigger Hill or Bear Gulch district and the Harney Peak and Custer City districts. The granite rocks of each locality continue to be tin-bearing until they disappear beneath the yet unremoved Palæozoic rocks.

Character of the Veins.

These veins have been classed by Newton and Jenny (who, however, did not observe their stanniferous character), Blake, Vincent and others as igneous or intrusive granites, but they seem to be true veins of a type known as segregated veins — different from true fissure veins in that they are parallel to the apparent bedding. Usually they are distinctly lense-shaped, which, however, is not derogatory to the value; for, standing upon any one lense, a succession of such lenses can be observed upon the line of the strike. The same will doubtless prove true upon the dip. Many of them, however, are of a true vein or tabular form, and can be traced for thousands of feet. This is true of the First Find, of the Champion, Tin Reef, Cleveland, and many others. The Margaret lode can be traced, with but few interruptions, from Battle creek to Iron creek, a distance of over 6,000 feet.

The line of demarkation between the granite vein matter and the inclosing schists is always sharp and well defined, and can be traced with the point of a lead pencil.

There is never any shading or blending of the two. They vary as much in breadth as they do in length. Some are only a few inches thick, while others exceed 100 feet. The amount of cassiterite present varies. It is never evenly distributed throughout the veins from wall to wall, but lies in zones or sheets. With the exception of being usually parallel to the bedding and not cutting across, these veins have all the characteristics of true fissure veins, and occasionally even this feature is not wanting, two having been observed which cut across the stratification.

The veins vary much among themselves, and not only this, but the same vein often completely changes its character in a short distance. Very often—indeed, nearly always when tin is present—one of the constituents of granite is wanting, and the vein matter is composed of quartz and mica alone, that is, greisen, if that word applies to veins thus formed; or it consists of an aggregate of soda-feldspar and mica, which, for want of a better name, has been called *albitic greisen*. At other times the vein consists almost entirely of a massive pinkish feldspar, and again, not infrequently, of quartz alone.

The Etta vein shows some peculiarities. It is columnar, so to speak, in form. In cross-section it is roughly an oval, having respectively the diameters of 150 and 200 feet. The arrangement of minerals is somewhat concentric. The central portion of the vein, or core, is quartz and feldspar, around which is a zone of albite and mica—*albitic greisen*—carrying tinstone in quite large quantities. Then comes a zone surrounding this, noted for its large and perfectly formed crystals of spodumene, ten, twenty and even thirty feet in length. The interstices between these crystals are filled with an aggregation of albite also carrying tinstone, but in a more massive form than the zone just within. Between the spodumene zone and the inclosing mica schist there is a micaceous aggregate composed of both muscovite and biotite, but barren of cassiterite.

The spodumenes are worthy of more than a passing

notice. They are probably the largest and best formed crystals of this mineral species ever reported. They are not peculiar to the Etta alone, but are found at the Tin Mountain mine, six miles west of Custer City, while smaller spodumens are common at many points in the section. Especial examination was made to see if any rule concerning their position with regard to the walls of the lode and with regard to each other could be observed, but none was found. They stand in the midst of the tin-bearing rock, crossing each other in all directions. One was seen over thirty-five feet long, without a break; and so far as exposed, it was perfectly formed. In other veins having a more tabular form there is usually a zone near one wall composed of mica, usually so arranged that the cleavage planes are either at right angles or parallel to the walls of the vein. The mica is generally quite fine near the walls, but rapidly becomes coarser until a zone of the largest crystals is passed. The tourmalines were frequently observed to have their vertical axes perpendicular to the wall, but the rule was far from general. Biotite is not common in the tin veins, and I have never observed it in association with the tin. The prevailing micas are of a light greenish-yellow color, passing into pure white, and are of the common, or muscovite, species. The feldspar is usually albite and the variety known as cleavelandite is common. Lithia mica has not been observed, notwithstanding lithia is found in such quantity as is evidenced by the spodumenes.

It is perhaps worthy of remark that when the three elements of granite are together in anything like ordinary proportion, tinstone is very liable to be absent. When the aggregation consists mainly of mica and quartz or of mica and albite, tin is usually present also. If the vein consists of feldspar alone, the tin is wanting, but when it is composed of quartz alone, as is frequently the case, the quartz is always banded as in a fissure vein, and is usually tin-bearing, also; but the tinstone is quite different in appearance from that found in the greisens. It is light reddish-brown, and

often occurs at the joints or planes indicating the banded structure. The crystals of cassiterite usually partake of the nature of the individual crystals composing the rock. If they are large, the tin crystals are large also, and *vice versa*. If the rock is quartz and mica, neither the crystals of quartz nor of mica inclose the crystals of cassiterite, but they occupy interstices, so to speak, between these crystals; but in the albitic greisen they are frequently inclosed in feldspar. In the quartz veins, the quartz also frequently incloses the tinstone.

Phosphates.

The great quantities of phosphatic minerals present is an extraordinary feature of these veins. Apatite, triphylite and heterosite are found in great quantities; autunite occurs sparingly and other phosphatic minerals, perhaps new, but needing further examination, are also found.

Other Associated Minerals.

Columbite is found in large quantities. Masses of many pounds in weight are very common, and the Bob Ingersoll claim yielded a mass of a ton's weight. This mineral is here quite commonly called tantalite, but all analyses so far made for me at the Dakota School of Mines, as well as a great number of specific gravity tests, have invariably shown that the mineral should be called columbite. Tantalic acid is always present in varying quantities, but never to such a degree as to be the predominating acid. The crystal form is always tabular, while the habit of tantalite is prismatic. A sample, however, from the Etta mine, analyzed by Professor Schaeffer, was pronounced by him to be tantalite. It gave the following result:—

	Per cent.
Tantalic oxide.....	79.01
Stannic oxide.....	0.39
Ferrous oxide.....	8.33
Manganous oxide.....	12.13
Specific gravity, 7.72	99.86

Professor Schaeffer further states that he was unable to find the least trace of columbic acid.

The following analysis of a sample taken from the Etta mine was made at the Dakota School of Mines by Dr. W. P. Headden, and gave:—

	Per cent.
Tantallic acid.....	18.20
Columbic acid	64.09
Ferrous oxide.....	11.21
Manganous oxide.....	7.07
Stannic oxide.....	0.10
Calcic oxide.....	0.21
	<hr/>
Specific gravity, 5.89	100.88

Five other samples from different sources — some of them from stream tin, some from lodes — were examined, and all gave very decided tests for columbic acid, and ranged in sp. gr. from 5.89 to 6.12.

From these tests we have been drawn to the conclusion that if tantalite — that is, a mineral composed mainly of tantallic acid — exists in the Hills, it is comparatively rare.

Graphite is a quite common mineral in the seveins. It is found in both the amorphous and cystalline forms. It is sometimes very pure.

Galena, carrying silver, is occasionally met with, while arsenopyrite, carrying gold, is not uncommon.

Beryls are found in all the veins, and often of large size. Garnets exist in all mines so far worked. Two varieties were observed, the ordinary iron garnet and a honey-yellow garnet, quite common but very small, supposed to be a lime garnet.

Ilmenite I have observed in these veins. Zircons and corundum have been reported by others. But I have mentioned enough to show that the veins will form an interesting study for the mineralogist, as we have every reason to believe that new and undescribed minerals will be found.

The mineral species so far observed by me in these veins

contain the rare elements of boron, phosphorus, fluorine, tin, lithium, glucinum, uranium, tantalum and columbium, as well as the more common ones—gold, silver, lead, arsenic, iron, sulphur, etc.

I have been thus explicit in describing these veins in order to show how perfectly they fall into the class of certain granitic veins of the Laurentian, described by Dr. Hunt. These are the endogenous veins which, he says, “Have been deposited from solutions in fissures of strata, precisely like metalliferous lodes.” This remark applies especially to those granitic veins which include minerals containing the rarer elements. Among these are boron, calcium, rubidium, glucinum, zirconium, tin and columbium.

Much of the remaining evidence which Dr. Hunt cites in support of his theory of the aqueous origin of certain granites in the Laurentian, and of the distinction he draws between granitic dikes and granitic vein-stones, is found here, among which may be mentioned the banded arrangements of minerals, the peculiar manner in which certain minerals incrust each other, and the rounded form of certain crystals.

It will doubtless be seen that these tin veins bear a general resemblance to those of Zinnwald. Von Cotta strongly maintained the now universally accepted theory that metalliferous veins were formed by aqueous agency; but as the tin ores of Zinnwald occurred in granite, he classed them as eruptive or injected, but at the same time expressed grave doubts as to the correctness of the view, saying: “This naturally remains very remarkable and problematical,” and of the veins at Erzgebirge, twenty miles distant, “The general character of the lodes is so like granite that they might be considered to have been injected in an igneous fluid state, with which, however, do not agree their slight breadth and banded structure.”

He seems driven to this view on account of his inability to conceive granite to be otherwise than an eruptive rock; and Newton devotes much space to showing that the Black

Hills granites were eruptive and not metamorphic. The alternative of a third view here presented seems not to have occurred to him.

The vein-stones of these lodes vary but little from the surrounding schists, and were probably derived immediately from them by circulating waters. The percentage of alkalies in the vein-stones is 15 per cent, while that in the schists is 8 per cent. Many of the elements found in the veins are known to exist in the schists, viz., gold, silver, sulphur, iron and graphite. The rarer elements, such as lithium, columbium and tin, which probably exist in the great mass of sediments, only in the most minute quantities, are found in these veins in surprisingly large amounts. This accumulation is best accounted for upon the supposition that they have been collected by percolating waters and deposited in these veins in quantities.

As neither the veins nor the large bodies of granite described at pages 18 to 20 seem to be of either eruptive or metamorphic origin, I conclude that such granites are not found in the limits of the Black Hills.

In the Cleveland vein, in Bear Gulch district, parts of the granite veins have been altered to a fine-grained dark green, almost black, rock. Its boundaries in the vein are as sharply defined from the white-colored granite which they traverse as the granite is from the inclosing mica schists. It carries a little fine-grained cassiterite and is believed to resemble closely the *Zwitter* of Altenberg. A further examination of it is now in progress.

Daubree has stated that the presence of tin is intimately connected with quartz, and after quartz certain minerals not common to ordinary lodes are habitually present. These are silicates into which fluorine and boron enter, among which are *tourmaline*, certain *micas*, *lepidolite*, *topaz*, with *apatite* and other phosphates. He supposes that the tin was introduced into the lodes originally as a fluoride or boride, or possibly in combination with chlorine or phosphorus. In the Black Hills veins, lepidolite and topaz do not occur. Tin is often found remote from quartz. When

tourmaline greatly predominates, the tin is absent. The greatest quantities of cassiterite occur in veins consisting of mica and quartz alone. The micas seem always to be ordinary muscovite. They have not been tested for fluorine. Fluorspar has not been found. No pseudomorphs of cassiterite, as in Cornish veins, have been observed. Orthoclase occurs very sparingly. The variety, microcline, much more frequently. Albite is everywhere the predominating feldspar.

Thorough analyses of all the minerals occurring in the tin veins are now being made at the School of Mines. Interesting results are expected.



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(647)

